Business Modelling for a Data Marketplace
Backplane and a Data Pricing Model Tool

Timoleon Farmakis
Why did data marketplaces emerge?

- The total volume of data created, captured, copied and consumed worldwide is growing rapidly.
- The use of data can change the way companies generate value and significantly change even traditional industries.
- Businesses are realizing the importance of external data.
- Security, trustworthiness, and ease of data access remain a major challenge in the market.

Big Data Market Size Projection
The Role of Data-marketplaces

Data-marketplaces can be an enabler for both internal and external monetization by:

- Solving the “Chicken and Egg” problem
- Providing an accessible avenue to commercialization;
- “Absorbing” processes that are beyond a company’s core competencies;
- Allowing owners to capture greater value and reinforcing their rights;
- Easily demonstrating the financial incentives;
- Allowing for broader synergies.
Data-marketplaces as a Catalyst for Business Model Innovation

**Owner**
- Receives:
  - Flat Fee
  - Pay-per Unit
  - Commission Fee
  - Subscription

**End-user**
- Pays:
  - Flat Fee
  - Pay-per Unit
  - Commission Fee
  - Subscription
  - Freemium

Main Revenue Partner:
- Seller
- Buyer
- 3rd Party
- Other
The market at a glance

Types of data marketplaces
- Personal Data Marketplaces
- B2B Data Marketplaces
- IoT Data Marketplaces

The process
- Browse Data
- Compare Data
- Sample Data
- Purchase Data
- Review Data

Types of data
- Energy Data
- Mobility Data
- Automotive Data
- Environmental Data
- Real Estate
- Health Data
- Financial Data
- Audience Data
- Machine Learning Data
Identifying user needs and challenges from the data market

Data Marketplaces

- Services Offered
- Trusted Data Providers
- Data Openness
- Data Relevance

Challenges to Trust

- Regulation
- Trusted Partners
- Clarity
- Ease of Use
- Accessibility of Services

Data Search

Effective Data Usage

- Ecosystem Maturity
- Data Cost and Pricing
- Data Openness
- Firm Level Issues
- Data Relevance

Dublin June 20-23, 2022
### The i3-MARKET Business Model Canvas

<table>
<thead>
<tr>
<th>Key Resources</th>
<th>Key Activities</th>
<th>Type of Intervention</th>
<th>Segments</th>
<th>Value Proposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partners + Key Stakeholders</td>
<td>Channels</td>
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<tr>
<td>Data Marketplaces/Spaces Data Owners/Consumers Open-source Community</td>
<td>Digital Space GitLab Conferences Social Media</td>
<td>Mobile App</td>
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<td>Customer Marketplaces</td>
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<tr>
<td>Cost Structure</td>
<td>Surplus</td>
<td>Revenue</td>
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<tr>
<td>Initial Artifact Development Promotion</td>
<td>Host Marketplace bonus</td>
<td>Commission fee</td>
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The Data Marketplace Business Model

Legend
i3-MARKET enabled Standard
# The Data Marketplace Business Model Canvas

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<td>Data Owners</td>
<td>Value Chain Positioning</td>
<td>Privacy</td>
<td>Self Service</td>
<td>Large Companies</td>
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<td>Data Warehouses</td>
<td>Data Processing</td>
<td>Security</td>
<td>Stakeholder Engagement</td>
<td>SMEs</td>
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<td>Service Providers</td>
<td>Data Transfer</td>
<td>Sovereignty</td>
<td>Community Events</td>
<td>Researchers</td>
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<tr>
<td>(Open) Data Community</td>
<td>Compliance</td>
<td>Cross marketplace trading</td>
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<td>Developers</td>
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<td>Integration</td>
<td>Smart Contracts</td>
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<td>Data as a Service</td>
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<td>Clean &amp; Processed Data</td>
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<td>Infrastructure</td>
<td>Digital</td>
<td>i3-MARKET enhanced</td>
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<td>Record Keeping</td>
<td>Ecosystem Engagement</td>
<td>i3-MARKET enabled</td>
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<td>Standards and Frameworks</td>
<td>i3-MARKET platform</td>
<td>Standard</td>
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<th>Cost Structure</th>
<th>Revenue Streams</th>
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<tr>
<td>Infrastructure</td>
<td>Transactional/Subscription/Licensing/Freemium</td>
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<td>Maintenance</td>
<td>Commission Fee</td>
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<td>Support</td>
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</table>
Revenue model and commission fee

Total Price = Fee + Data Price

DATA CONSUMER

PAYS FOR DATA

DATA PROVIDER

DATA PROVIDER MARKETPLACE

COMMUNITY
Critical priorities

- Strengthen and enhance BM channels.
- Support new products and services.
- Establish a strong connection and manage critical stakeholders.
- Strengthen the i3-MARKET brand.
i3 Market stakeholders
## i3 Market stakeholders

<table>
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<tr>
<th>Open-source community</th>
<th>Telecommunication Companies</th>
<th>Other companies</th>
<th>European Union (EU)</th>
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<tr>
<td>Entrepreneurial Community</td>
<td>Internet Related Companies</td>
<td>SMEs</td>
<td>Council of Europe (CoE)</td>
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<tr>
<td>Individuals</td>
<td>Manufacturing Companies</td>
<td>Freelancer professionals</td>
<td>Organization for Economic Cooperation and Development</td>
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<tr>
<td>Data Marketplaces</td>
<td>Healthcare companies</td>
<td>National Governments</td>
<td>Researchers and Professors</td>
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<td>Data Warehouses</td>
<td>Data Spaces</td>
<td>Municipalities</td>
<td>Digital/Online Media</td>
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Our price recommendation calculator

How can we make it more user friendly?
Creation and Cross-validation Methodology

5 steps Process

Sophisticated

Parameters and Factors Determination
- Literature Review
- Key Parameters
- Characteristics
- Pricing Factors

Validation through expert input
- Quantitative Research
- Parameters & Weights
- How much would you be willing to pay for data with X characteristics?
- How much would you bill a dataset with Y characteristics?

Validation through the Pilots
- Quantitative Research
- Parameters & Outcome
- Did we miss any significant parameter/factor?
- Was the suggested price reasonable/what you expected?

Validation through SMEs workshop

The final i3-MARKET pricing model
- Using the feedback and the input collected to revisit and reform the pricing model towards a transparent & fair tool
Suggested Pricing Model parameters

- Value-based parameters
- Quality-based parameters
- Cost-based parameters
- Law and License-based parameters
Our parameters in more detail...

- COST OF COLLECTING, STORING OR/AND ANALYSIS
- ESTIMATED VALUE FOR THE CONSUMER
- DATA COMPLETENESS
- DATA ACCURACY & VALIDITY
- UNIQUENESS
- RARITY/SCARCENESS
- TYPE OF LICENCES
- CREDIBILITY OF THE SELLER
How it works?

- A user-friendly pricing calculator
- Default parameters with specific weights that affect the final result
- Questions to assist the data provider/seller self scoring
- Scales in a user-friendly way
- The resulting value is a recommendation, and the user chooses whether to accept or modify it
Thank you!

Find more:
https://www.i3-market.eu/