



A FRAMEWORK FOR DATA MOBILIZATION FOR DIGITAL TRANSFORMATION

Overview: Mobilizing data is a key objective for large established firms undergoing digital transformation. These firms attempt to create value from data through platforms, connecting multiple data holders and data seekers. Much of this intermediary activity depends upon increasing volumes of users brought together by means of 'network effects.' Transaction data flowing through multisided platforms can in theory, be repurposed to suit different types of value generation requirements, for example, marketing to new customers or maintaining customer loyalty.

Turning transactions into value-adding resources can be challenging, for example, in terms of pricing, the assignment of intellectual property rights, and privacy safeguarding. As part of their contribution to the DIGIT project, Professor Leroy White, Dr. Dimitris Batolas, and Dr. Nikolai Kazanstev, developed an evidence-based data mobilization framework to help businesses tackle these challenges more effectively.

This framework builds on a systematic literature review, the results of which have been combined with transferrable learning from embedded case study research at a well-known Agri-Tech company, currently masterminding a world-first open data platform to support the animal health industry. One of the authors worked closely with the company to develop and validate the framework, based on interviews and focus groups with a cross-section of stakeholders and partners.

Outcomes:

- An evidence-based framework that will help firms categorise the data-led challenges they face, principally by dividing them into two separate categories or dimensions:
 - Dimension 1 focuses on mobilizing resources
 - Dimension 2 concentrates on processing 'big data'.
- The intersection of these dimensions gives rise to four stages for data mobilization, described below:
 - Data Discovery:** Firms must focus on *screening* and *signalling*. Screening encourages due diligence behaviours on the part of data holders, while signalling encourages data seekers to identify information about the trustworthiness of data holders.
 - Data Access:** Necessitates third-party involvement in creating trust between data seekers and data holders via hackathons and matchmaking.
 - Data Sharing:** Once a relationship of trust has been established, data holders and data seekers look to create opportunities for data sharing. Data-sharing agreements are also important, helping to alleviate power imbalances between seekers and holders. It is here the value of the data is realized.
 - Data Governance:** Greater trust and transparency can be mitigated by encouraging data holders to set terms for data use.

This case study links to DIGIT- Workpackage 3 activities that focus on organizational structures and systems. The research team led by Professor Leroy White is specifically interested in addressing the challenges of mobilizing data for large established firms.

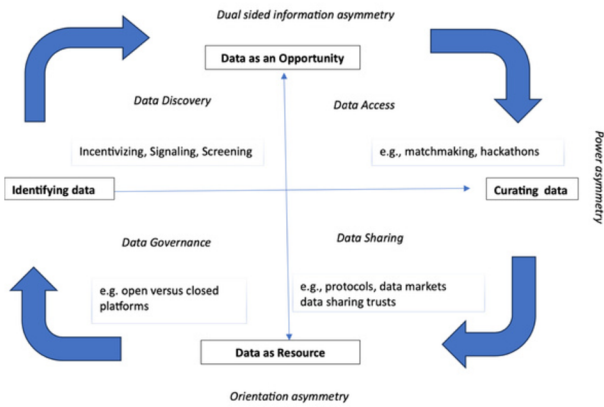
1. Prof Leroy White, Dr Dimitris Batalos-University of Exeter
2. Dr Nikolai Kazantsev – University of Cambridge



“Mobilisation data from a resource to value is a challenge for large organisations. This work represents a step toward achieving that goal”

Prof. Leroy White
University of Exeter

Figure 1 Data Mobilization Framework



The Challenges & Opportunities:

Data's intangible nature leads to challenges for large established firms, including:

- data is often left underexploited
- industry disruption is a risk,
- sharing data across organizational units and between firms is restricted due to privacy concerns.

Specifically, for data mobilisation via platforms, there is the problem of dual-sided information asymmetry and orientation asymmetry. Dual-sided asymmetry is where data-holders lack sufficient knowledge of data-seekers' intentions, creating a barrier to trust, while seekers are uncertain about the quality of information they are likely to receive. Orientation asymmetry arises where these incongruencies are a barrier to collaboration.

The challenge for further research is in accessing empirical case study material to understand how large, established firms can mobilize data to create value during their digital transformation. Our data mobilization framework aims to overcome trust and information-sharing paradoxes allied to dual-sided information asymmetry and orientation asymmetry, enabling large firms to effectively mobilize and monetize data through platforms. This creates the potential for firms to enhance value creation, foster innovation, and gain competitive advantages in their industries by better leveraging data in decision-making and digital transformation initiatives.

Future Objectives for this project:

- To test and evaluate the framework with further case studies
- Explore data sharing and data privacy and protection further in the framework

Activities:

- Engaging with organizations to road-test the framework.
- Discussing with NHS leads on how the framework could be used with EPRs

The first draft of the data mobilization framework is ready to be tested. The next step is to develop a process map on how organizations can use the framework.

Key Publication:

Kazantsev, N., Batolas, D., & White, L. (2024). Managing asymmetries for data mobilization under digital transformation. *British Journal of Management*, 35(2), 663-678.