

## The business of platforms

Data Analytics efficiencies in an ecosystem driven economy

Article 5



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# Foreword

As stated in the first article of [The business of platforms series](#), the role of the platform business is to provide a governance structure and a set of standards and protocols that facilitate interactions at scale so that network effects can be unleashed. These interactions between different platform players either create new data sets or consume existing data. Furthermore, these data sets can be analysed to unlock insight that can be actioned to make the platform more customer centric.



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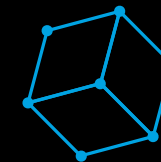
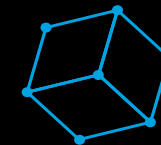
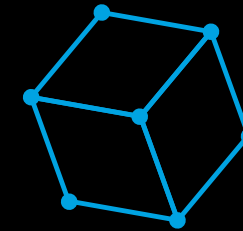
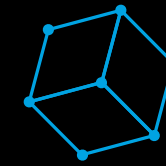
Data Analytics is arguably the lifeblood of any platform business, allowing the business to perform key functions and function optimally. In this article we unpack the role of Data and Analytics and its value which is to better understand the costs and values derived from the interactions between different players (i.e., consumers and producers) and uncover new opportunity streams with an aim to further grow the value of a platform business.

As a capability, data and analytics is essential for any business that wants to thrive in the market. This is even more the case in a platform business where the key success factors are to:

- Provide frictionless transactions
- Externalise assets (e.g., Uber cabs are owned by the drivers and not by Uber)
- Provide equitable value share
- Increase network effects

While the concept of platform businesses is not new, many organisations are still grappling with the issue of monetising these platforms. This is largely because the role of data and analytics is not well understood, and key platform performance metrics are not clearly defined and measured accordingly.

In this article we will explore different types of analytics by unpacking the analytics progression of usefulness, identify different players within the platform business, outline key data points that either created or consumed data within the platform value chain, and pull everything together by outlining key metrics and their attributes (i.e., data, type of analytics to perform and affected platform players) to monetise or measure the effectiveness and profitability of a platform.



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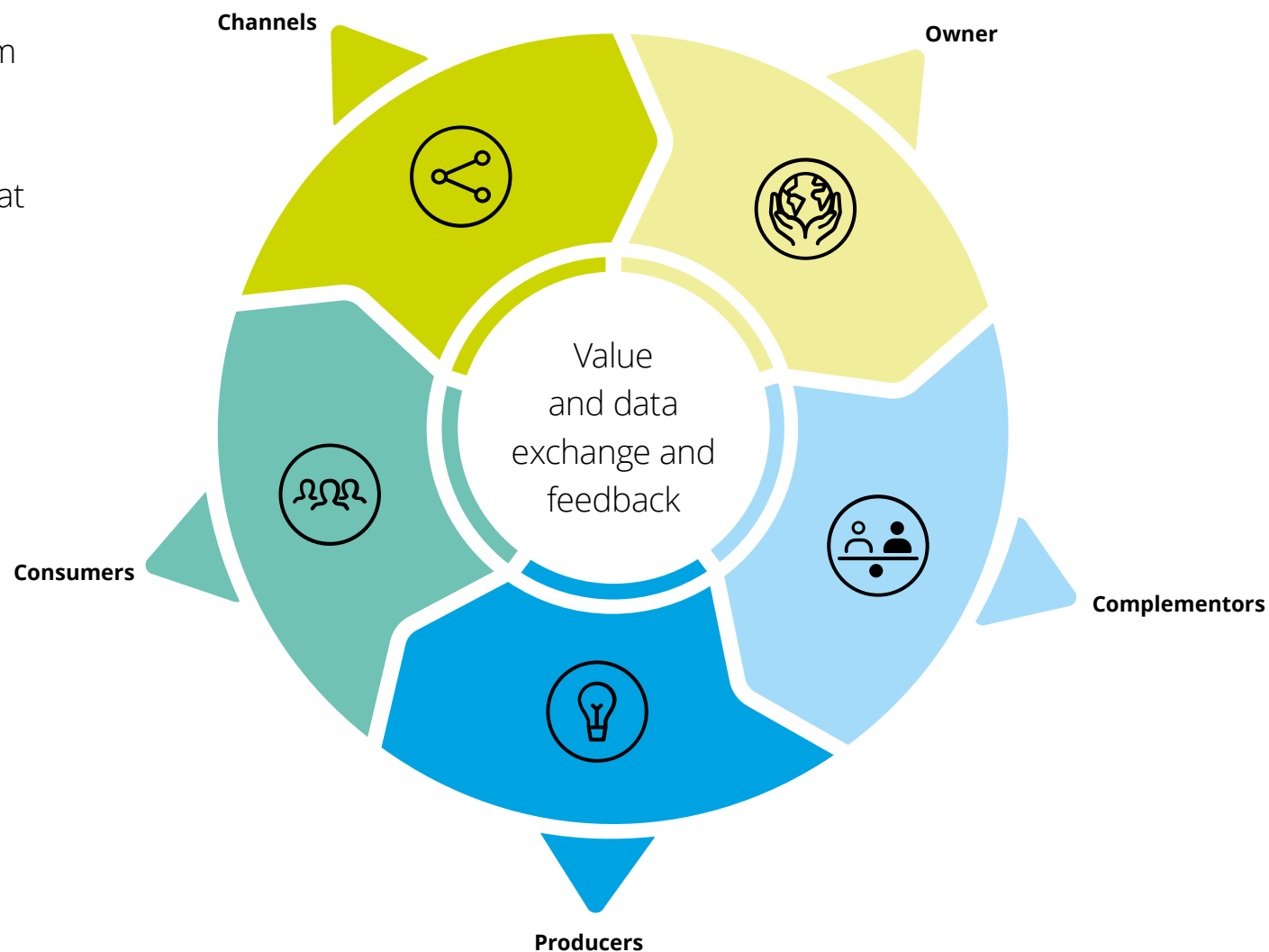
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# Players in a platform business model

One of the common features for any platform business, regardless of platform type, is a diverse list of players that consume and produce new data points which are then analysed to further enrich the platform and support network effect growth.



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### 1. Owner

The platform owner defines the fundamental purpose of the platform, the business model, and the governance of the platform. The owner controls the intellectual property, who may participate, the architecture, Application Programming Interfaces (API) and standards, and defines the commercial rules. In the context of financial service platform, the owner also owns customer, account and transaction data which is crucial to the success of a platform.



### 2. Complementors

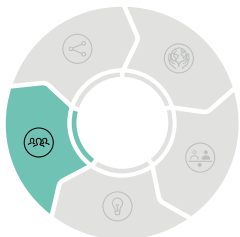
Complementors provide the complementary or derivative offering which ultimately create real customer value proposition. Complementors such as Financial Sector Deepening (FSD), Data Science innovation hubs, cross-border trade, Agriculture and energy sectors provide industry specific data and insights that improve the value of a platform thus creating network effects.



### 3. Producers

Producers fulfil the supply-side of the platform ecosystem by offering products and services to customers. In a linear business model, producers are responsible for sales and marketing of their products whereas in a platform business ecosystem, the platform provides means to showcase products to relevant consumers using Data Analytics. In this instance some of the producers are:

- Farmers looking to sell their crops in the market.
- Manufacturers of machinery, engine parts, furniture and electronic appliances looking to sell their products.
- Shipping companies with capacity to transport goods from manufacturers to consumers.



### 4. Consumers

Consumers are the key players in the platform as buyers or users of the offering. Example, in a case of an E-hailing service, riders are users or buyers of the ride to their destination.



### 5. Channels

In a digital world, most financial products services are accessible online through various channels such as computer operating systems and mobile device platforms. In a context of a FSI platform that is packaged in a form of a downloadable App (like any banking app), these channels provide crucial data and insight about such as number of downloads, user location, type of device and most importantly user review and ratings. The channel serves as a vehicle in which the platform is made available to the user.



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# The 5 types of analytics used in a platform business

According to the Gartner report published in 2018 (Sondergaard, 2018), a platform business should consist of five main domains, namely the customer experience domain, the ecosystem/partner domain, the IoT and other technology domain, the employee and firm infrastructure domain and the data analytics and intelligence domain.

The adaptation of the Gartner model is illustrated in Figure 1.

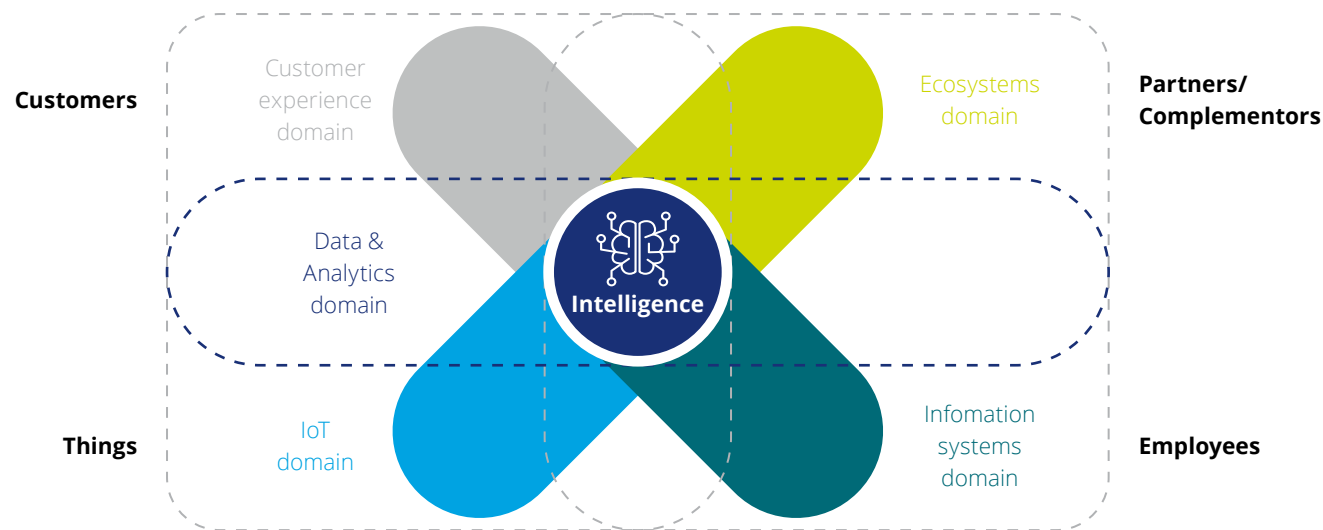
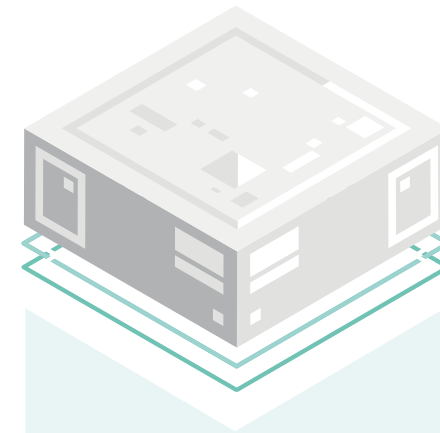


Figure 1



Before delving into the role of Data and Analytics in the platform ecosystem, it is important to understand different types of analytics that can be derived from the big data to supporting decision-making. Figure 1 illustrates these different levels of usefulness.



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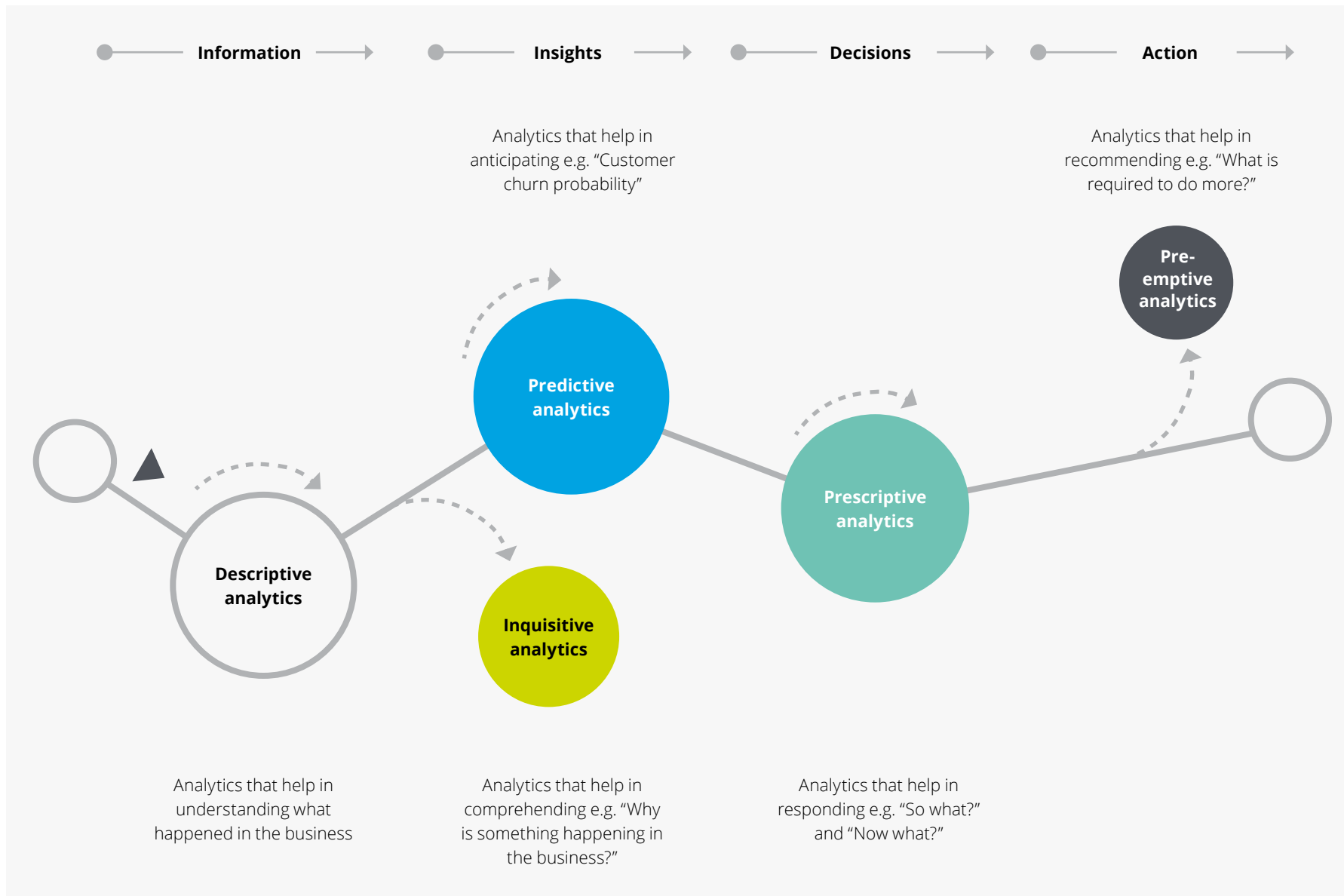


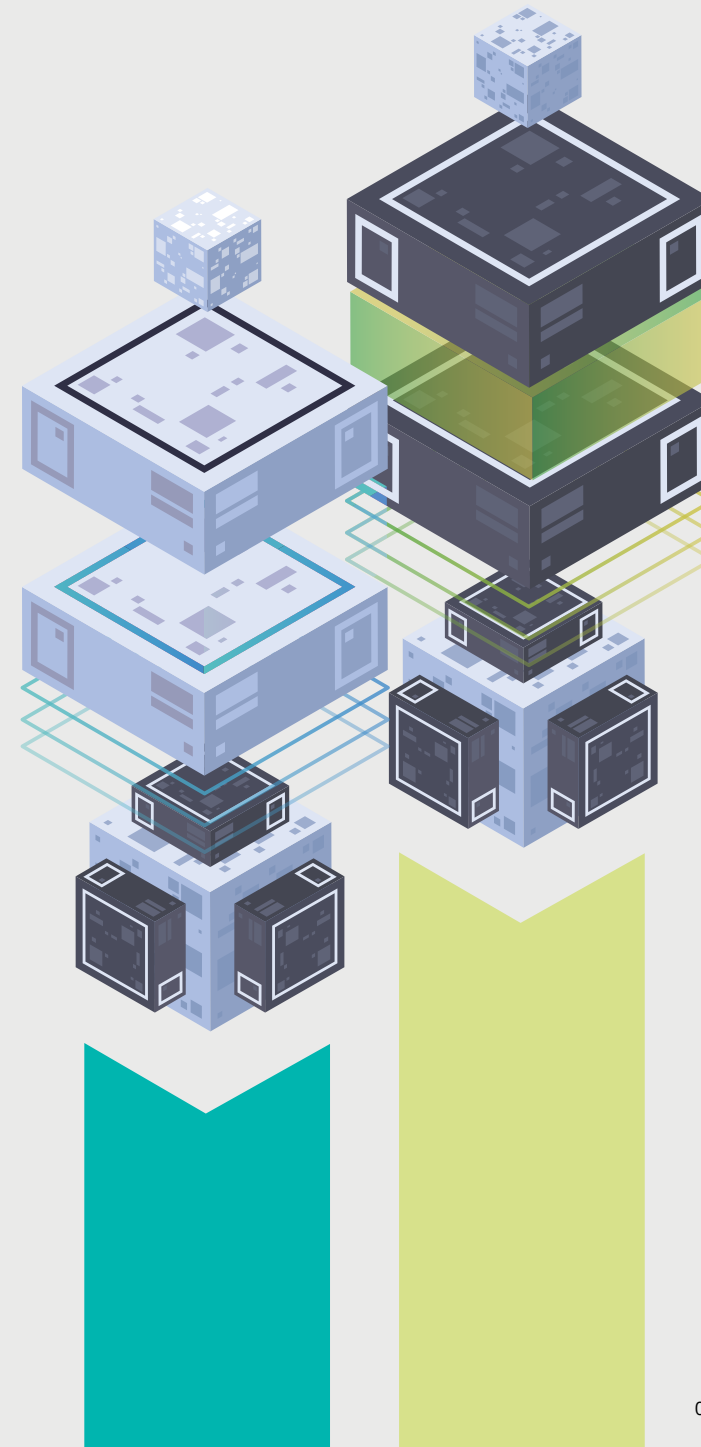
Figure 2 (Source: Adapted from Armstrong & Lee, (2021))

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As shown in Figure 2, organisations can achieve progressive levels of usefulness with big data:

01. As a first measure, **Descriptive analytics**, allows us to describe simple things about the data, such as averages of variables or distribution (e.g. number of new customers in different geographies). Descriptive analytics is based on historical data and, therefore, are backward-looking.
02. **Inquisitive analytics** involves seeking patterns in past data. Statistical techniques, such as correlation and regression, achieve this aim. Inquisitive analytics answers terms such as why, what, what if and how. Examples:
  - Based on sales data from previous years during Christmas holiday, what is sales projection for TVs units for 2022 Christmas holiday season.
  - What if we increase the price for product x by 5% during the easter holiday?
03. **Predictive analytics** is concerned with predicting future patterns, behaviours and events. These predictions are based on past patterns; therefore, they build on inquisitive analytics. Predictive analytics has become a major area of interest and usefulness for any organisation seeking to understand customer future behaviours (e.g. customer churn probability).
04. **Prescriptive analytics** picks up where predictive analytics left off by prescribing possible responses to a prediction. Drawing on the above example of a customer churn probability – it is all well to predict customer churn, but far better if the analysis involved could correctly suggest the best course of action (e.g. provide a special discount to a customer to create stickiness).
05. Finally, **pre-emptive analytics** goes even further into the future, and into the possibilities of data usefulness by using big data pattern analysis to suggest courses of action by which future platform operations could be systematically improved. Returning to the customer churn probability example, it is great to predict the likelihood of churn and make machine-specific prescriptions regarding what to do about it. However, far better would be analyses informing affected players (i.e. complementors and producers) on how to market, package and/or price their products better to eliminate issues of revenue loss.



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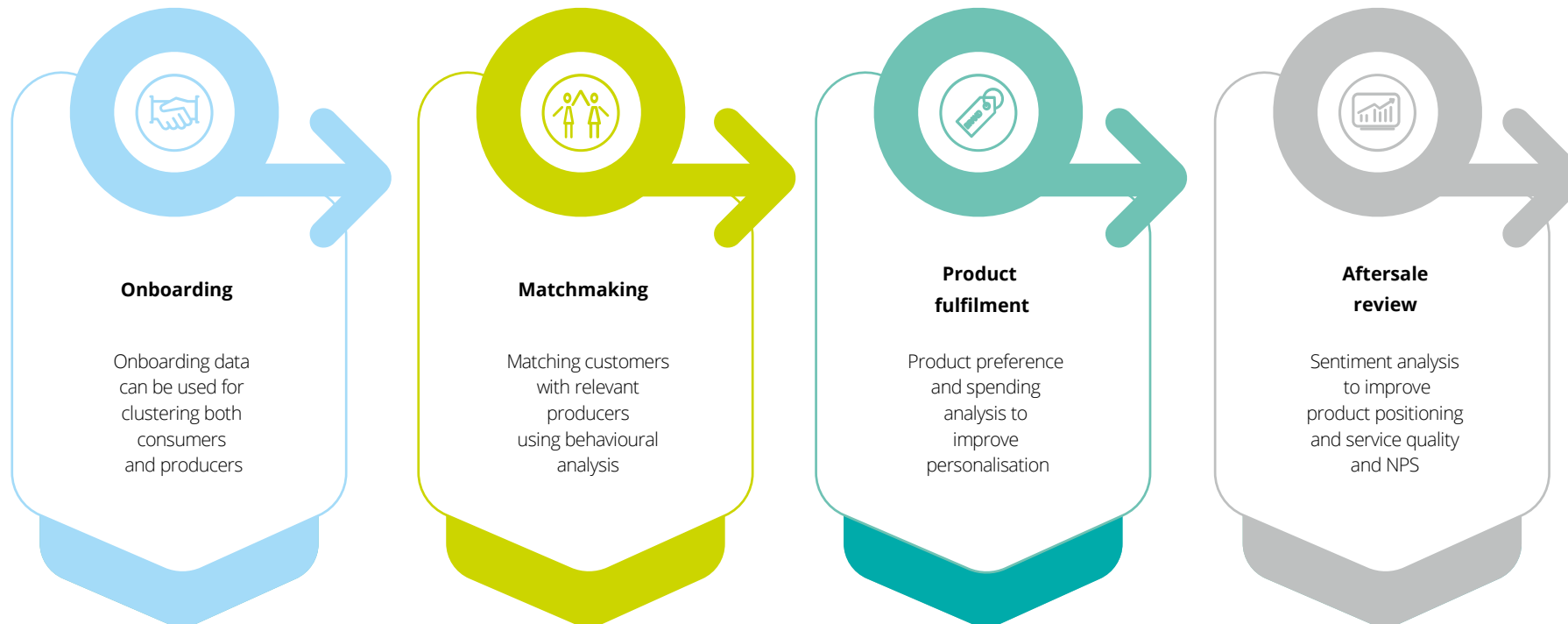
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# Key data points: Where data is produced and consumed in the ecosystem



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Below is a list of platform activities that generate and/or consume data:



### **Onboarding:**

This entails registration of customers (demand side), complementors and producers (supply-side) to the platform. During the onboarding process basic data such as demographics, product/service required is captured and stored in the platform's data repository. These data are essential in ensuring that the platform provides relevant products and services to the consumer. Data Analytics, as a capability, is used to analyse these data.



### **Matchmaking:**

The matchmaking phase entails the process of linking customers with producers of goods and services. Machine learning is used to analyse customer behaviour, conduct segmentation, and recommend products.

- Clustering is the unsupervised ML model that is used to sort data objects (such as demographics, transaction history and product holding) into groups of dynamic segments that provide insight about customers' behaviour.
- Regression model which is used to predict scoring such as temperature, or the likelihood that a customer will buy a product.

In a platform ecosystem, these ML models are used in tandem to identify and group customers who exhibit similar behaviour, and recommend relevant products that customers have a high propensity to take-up.



### **Product fulfilment:**

During the product take-up process, existing product data from a producer is linked with existing customer data to create a new product holding dataset for a customer. Some of the product fulfilment data attributes are product type, date taken-up, product maturity date (in the case of a loan), shipment date, supplier/producer details, price, etc.



### **Aftersale review:**

Consumer feedback is essential in ensuring that the platform meets its intended objectives. Data collected during customer review is mostly in text form hence it is ideal to use a Machine Learning sub-process called Natural Language Processing (NLP) to perform sentiment analysis. The outcome of this analysis provides an honest perception about customer's experience and could lead to an increase or decline in usage – which ultimately leads to an increase or decrease in network effects.



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# Tracking the correct metrics

The process to ascertain the effectiveness of a platform business model involves measuring Acquisition, Activation, Retention, Referral and Revenue (AARRR).

Over the last few years, a consensus has started emerging that start-ups, and by extension digital platforms, should be measured using the AARRR metrics (B Armstrong and G Lee, 2021). The table below describes these metrics and appropriate data analytics models to use:

Metrics	Description	Data Analytics models
Acquisition	Acquisition describes how people find the platform and turn into customers. It is important to track every step of the customer journey in the funnel, not just look at the final conversion rate to a paying customer. In the case of a platform, acquisition of complementors is as important as acquisition of customers.	Daily Sale MI Dashboard – New to platform <ul style="list-style-type: none"> <li>• Number of downloads</li> <li>• Number of new registrations</li> </ul>
Activation	Activation is about turning passive acquisition into active/primary participation on the platform. It is not enough to get people to download the app or sign up on the platform if they are going to stop using it right after that. An active customer is someone who keeps coming back to the platform to buy products/services.	<ul style="list-style-type: none"> <li>• Customer Churn Analysis</li> <li>• Activity/Behavioural Analysis</li> <li>• Product Holding Analysis</li> </ul>
Retention	Retention means that customers regularly come back to use the product and providers/complementors keep providing their services and /or developing value-adding innovative products. The opposite of customer retention is customer churn, and this is important to measure because: <i>growth = customer acquisition rate – customer churn</i>	<ul style="list-style-type: none"> <li>• Customer Churn Analysis</li> <li>• Minimum Revenue per Customer Analysis</li> <li>• Next Best Offer/Product Recommendation (Clustering model)</li> </ul>
Referral	Referral measures the extent to which digital business turn their customers into advocates. Referrals are often more effective in attracting new users into the acquisition part of the funnel.	An important sub-metric to pay attention to is viral coefficient which essentially measures the number of new activities each customer refers to the platform
Revenue	Revenue is the ultimate objective because it is crucial to convert activation and retention into revenue. It is also important to measure the revenue realised from complementors to ensure that all platform players are contributing to the bottom line.	Customer Primacy and Profitability <ul style="list-style-type: none"> <li>• Customer Lifetime Value</li> <li>• Customer Acquisition Cost</li> </ul>



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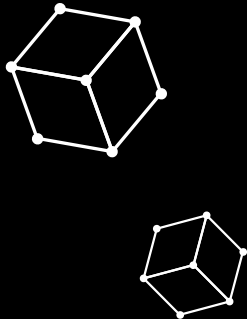
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Data Analytics is central to the functioning of a platform business.

A clear understanding of where and how data is generated and consumed in the platform business value chain is important in order to ensure the correct application of data analytics and create a differentiator for a platform business to thrive.



It is through the effective use of data Analytics that organisations can realise the value that each player brings to the ecosystem and maximise the benefits of network effects. In the case of Financial Service entities, the use of Data Analytics supports the growth of the platform while ensuring that all customer needs are met in a single trusted environment. In other words, customers will see no need to switch or to be multi-banked.



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