

Unlocking the Potential of a Product using Functional Usage Measurement

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Abstract

Product-Led growth explores the mindset of putting the product at the center of all business functions. This generates even more steering capabilities considering Business to Business Product Management scenarios. It puts the functionalities of a product as the driver for conversations from design, marketing, engineering, sales, and customer success. It is essential to ensure the customer's behavior regarding how the product is used for making calculated investments for the product roadmap. Depending on the Stock Keeping Units (SKUs) of a specific product, license or consumption metrics are identified for each product. At the same time, there is often less focus on functional usage measurement that can provide a detailed evaluation of a product and how consumers use the product's features in reality. The functional usage measurement of a product can help clarify the feature prioritization and later investment while also helping other business units like Presales, Marketing, and Customer Success to initiate data-driven conversations with the customer for future upskill opportunities. This paper explores the topic of functional usage measurement and how current industry practitioners can leverage it to make data-driven decisions for long-term product strategy.

Keywords: Functional Usage, Consumption, Product-Led, Analytics, Product Management, Metrics

Introduction

Application success through the current Business to Business (B2B) industry practices requires a clear vision along the lines of its corporate strategy and the product roadmap. Various components influence the path toward a flourishing ecosystem that builds on the right portfolio, ensuring a funnel of innovation in the product. All business functions must be aligned to the common objective and build products that delight the end-users. Product-led growth is a business strategy where the product is the primary driver of user acquisition, expansion, conversion, and retention. The result is a company-wide focus on the product as the primary driver of long-term, scalable business expansion across all departments, from engineering to sales and marketing. [1] This often results from a thorough Market and Product Analysis, which shapes building the right product. While the product is maturing along the product life cycle, it is critical to focus on the consumption of the applications and how customers use various features offered.

Usage measurement and consumption of license materials give us a fair idea of how customers use the application. This forms the foundation for Data-driven decision-making for various business functions, including Product Management. Any decision related to the product can be built on data with the correct understanding of the offerings. And may also create suitable heuristics for intelligent algorithms to make predictions and forecasts. There is a deeper understanding of the customer if the focus is on functional usage measurement and how the features offered by a product. Functional Usage measurement explores the recording of usage of services, UI applications, and records, along with the application-specific Key Performance Indicators (KPIs) that provide a good understanding of the customer and how the product is being used. This information highlights different perspectives of the product and may mean different things to different business functions. Relating to the ISPMA framework, Product and Solution Management can utilize this data for core aspects, whereas Development, Marketing, and Sales & Fulfillment, may use the information for their purposes.

This paper discusses Functional Usage measurement and how it impacts the different business functions to make data-driven strategic decisions. The subsequent sections cover related works and example case studies, followed by a deep dive into Usage Measurement. It also covers in-depth how the different

business functions can use the insights obtained by the focus on functional usage measurement. The advancements in data visualization techniques have also helped in this area, and there was an attempt to look at various tools that enable better representation of the insights.

Literature Survey

The subject of product-led growth for Enterprise applications is less explored, and this section covers similar research focusing on usage measurement. In the first paper by D. McKinnon and N. Tummon in their paper titled “Measuring Usage: A Comprehensive Analysis of a Social Work Journal Collection”, looks at how much is inferred regarding a library's management of relevant social work journals from consumption data, survey results, staff articles, and a look at open access (OA) availability. Collected from various sources—a custom report by 1Science and the outcomes of a staff poll on the best publications for teaching—were combined to analyze a collection. The best articles were chosen from a list of social work-related journals based on article consumption, staff publications, and citations of faculty-authored articles. A publications analysis utilizing faculty websites and author searches in Web of Science was also finished to offer local, contextual data. The journals' OA level, archiving policy level, and archiving policy of the publications was determined using SHERPA/RoMEO. The research also took the journals' repository distribution into account. Findings show that virtually all periodicals deemed crucial to community development are available at the McGill University Library. While these findings will benefit librarians who assist human services academics, graduates, and professionals, a secondary goal of the study is to present a technique that library staff conducting comparable investigations in various fields may employ.

[5]

In the subsequent paper by J. Anderson, M. Azizi, S. Salem, and Hyunsook Do on using usage patterns from telemetry data for test case prioritization. Ubiquitous telemetry is included in contemporary systems to enhance dependability and facilitate monitoring and diagnostics. As a result, it considers account software use characteristics in determining how to execute tests, which opens new possibilities for

regression testing methodologies. Their earlier work on test prioritizing using tracking data produced findings that indicated a rate of progress in test suite reduction and test execution duration. This article explores this strategy and uses prioritizing based on different prioritization techniques in open-source projects and enterprise-level cloud applications. They wish to offer practitioners a prioritizing system that is efficient and easy to use. The other objective is to evaluate the outcomes and advantages of this strategy to techniques based on source code, which is the most suitable testing prioritizing method. They describe a technique called "telemetry fingerprinting" for determining use patterns based on telemetry. We perform empirical research on many software applications using different techniques to calculate fingerprints to demonstrate that telemetry fingerprinting may be used to prioritize regression testing. According to our research observations, the suggested strategies could uncover searchable errors more quickly than the coverage-based prioritizing strategy by over 30% by reducing the execution durations of regression test suites. The outcomes also show that fingerprints may be used to enhance regression testing methods and are efficient in detecting use trends. This study presents the idea of telemetry-based software usage pattern fingerprints. They provide several fingerprint computation techniques and carry out empirical investigations that demonstrate the potency of fingerprints in recognizing varied usage patterns. They think these methods may enhance regression testing approaches beyond the existing state-of-the-art, resulting in more price and reliability advantages. [3]

Usage Measurement

Software products, apps, and digital tools are unique, and a wealth of product usage metrics can be collected. Product usage metrics are a set of measures that gauge how customers interact with a company's products. They give business professionals the data they need to overcome obstacles, increase adoption and retention and enhance marketing success. Product usage metrics generally focus on when customers use a product, how they use it, and how they feel about it. Additionally, such data depicts how users navigate your product, the features they use the most, and the issues they're facing.

Product usage metrics are vital assets as they provide core insights into user journeys and pain points. This helps product managers and organizations take a suitable course of action to improve your product based on these metrics. Some of the core insights can be:

- **Understand the customer journey and improve the experience:** Understanding how your product is used helps product teams build more valuable products. This leads to more streamlined products with fewer friction points – all by using data to make informed product decisions.
- **Improve customer retention:** as the product caters to and will eventually use the usage measurements, be more of what the users' needs or help their pain points, in turn, has a positive effect on the retention and further usage of the product
- **Better decisions:** the insights that product usage metrics provide allow companies to make more informed decisions about their futures. They can help businesses improve their product development, eliminate waste, improve customer relationships, increase revenue, and enhance their brand's image.
- **Greater insights:** Product usage metrics are an excellent way to measure the effectiveness of your company's engagement, sales, marketing, and customer support operations. They can also help you understand how customers view your business and its products.

License Consumption

Every business uses software to manage business processes and communicate with employees, customers, vendors, and for other purposes. Using adequately authorized software is essential. This means having the proper license to use the software. The standard license metrics or KPIs could be based on Active Users, a specific type of document created (entry creations), FUEs, material entries, etc. These are KPIs that impact the pricing for the specific product.

Functional Consumption

Functional usage of a product indicates specific features available with the product and how the end-users are using them. This relates to how a customer uses a product regularly. The analysis of Functional Usage forms the basis for various decision-making that impacts the product's more extensive roadmap and strategy. The direct relation to how a product's features are used is an essential criterion for all business roles to act on the insights gathered from this type of usage data.

Data-Driven Product-led Mindset

Product-led growth is a business strategy where the product is the primary driver of user acquisition, expansion, conversion, and retention. The result is a company-wide focus on the product as the primary driver of long-term, scalable business expansion across all departments, from engineering to sales and marketing. [1] Product-led growth is a mindset that enables every business function, ie., Sales, Customer Success, Engineering, Support, Marketing, and Design, to revolve around the product. The characteristics of a product-led mindset require the following:

- Aligning every business role around the product
- Traditional approaches related to intuition are not considered, and the basis for any decision-making is data-driven insights
- The product forms the primary marketing channel
- Focusing on an engaging onboarding experience for the product
- Self-service products to work as a self-help service for customers
- Utilize feedback to deliver better

Using data to drive this mindset, this paper evangelizes functional usage measurement to cater to all business roles. Moving out of the traditional approaches where numbers for sales and marketing influenced the more extensive roadmap, the transition of emphasizing the usage as an alignment to take strategic decisions on investment for a product is essential. The development of products and subsequent

features clarifies how certain features are used. For specific industries, if a trend in functional usage is observed already, the decision to invest in features that have exceeded expectations or, realistically, have performed well should be emphasized during any post or presales activity. Other business functions, eg., Engineering, have the same perception while planning for an upcoming release. The product-centric approach combines all the business roles and makes decisions unanimously, keeping the product at the center of the lifecycle.

Case Study

Consider Airbnb and how specific vital metrics can be classified based on guest demand, supply from hosts, and platform perspective. Depending on the data collected for the functional metrics mentioned, they can be utilized for various business roles, as discussed earlier. The following table depicts the critical metrics of Airbnb. This considers various metrics around Acquisition, Conversation, Engagement, monetization, and Satisfaction.

Metrics	Demand - Guests	Supply - Hosts	Platform
Acquisition	# App Installs # Unique Customers # New Customers # Unique User Sessions	# Listings # Registered Hosts	# Page views – referral, organic, direct # Platform session time # Bounce rates
Conversation	# Bookings # Bookings per active guest (monthly)	Listings per host Bookings per active hosts (monthly) Occupancy rate per listing	# Bookings completed # Bookings per active listing # Bookings per user session Cancellation rate
Engagement	# Daily active guest users # Interests or Booking requests # Messages per user # Avg. length of guest stay	# Daily active host # Response rate # Response time to inquiry/request	# Messages per listing #Reviews or Testimonials
Monetization	Revenue per active guest	Revenue per listing Revenue per active host	# Avg Ticket size per booking GMV – Gross Merchandising Value EBITA – Earnings before interest, taxes & amortization Total Commission Value
Satisfaction	% of 4+ Guest Ratings NPS CSAT	% of 4+ Host Ratings NPS CSAT	% of 4+ rating bookings # Referrals Issue Resolution Time

Table 1. Airbnb key metrics matrix [4]

Roles of Functional Usage Measurement in Various Roles

The success of a product is a combined effort of all business roles involved and at the center of every activity is the product. Often these roles rely on separate metrics to drive their activities, but in a product-led mindset, the numbers that steer the product's success are the same but mean different things for different roles. This section looks at various business roles and how functional usage insights help steer the product and also steer activities for them.

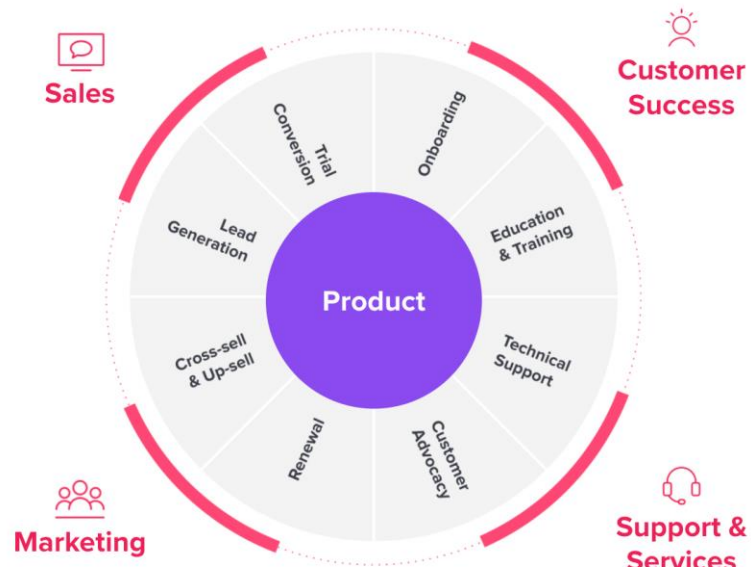


Figure 1. Product at the center of all roles [9]

Presales

Pre-sales activities are those conducted in the sales process before acquiring a client and significantly influence the business's operating and financial health. In such roles, it is essential to understand the customer requirements and their pain points, which will help them drive their conversations toward the available solution and its features. At the same time, the usage history of existing customers makes it easier for the sales representative to also focus on functionalities that have been heavily used. The discussions are further streamlined to insights gained from analysis of prior usage of the products and shift the focus towards the customer through the product.

Marketing

Highlighting and promoting a product's capabilities depends on the features that the team believes have potential and are required by customers. If the selection of features to be promoted is based on usage, the behavior of the marketing stream is influenced by data. It is the impact of the product combined with market research that drives marketing. Promoting features based on insights given that feature A was initially perceived to be the Value Proposition for the product, but data revealed that feature B is more used. This triggers the steering metric for the marketing to be feature B instead of the initially perceived feature A. This leads to the overall goal of product-led behavior and driving discussions with data and its insights.

Customer Success

Customer Success or post-sales activities impact any upselling opportunities and, at the same time, provide timely support to customers. Preempting the areas where there is a possibility of improvement or an opportunity for an upsell can be purely data-driven. The emphasis here is also on functionalities that can be essential for customers of a specific industry and makes an easy case for Customer Success representatives to drive conversations around insights.

Engineering

Building an application often involves combining different prioritization decisions with scrum and agile methodologies. Some situations require more effort invested in a specific feature, whereas others require less emphasis while planning for a release. Having a data-driven approach helps get a constructive approach to the outcome of such discussions. At the same time, a transparent insight into how the customer uses different features also helps the development teams to be closer to how their code is faring in natural production systems and the value they generate through their regular jobs.

Product Management

The role of a Product Manager is heavily influenced by how a product is used. A product's long-term strategy and roadmap are transitioning and require a more data-driven approach. Using functional measurement thresholds for specific features clarifies how customers use the application and lays the foundation for the right vision for the product portfolio. This clarifies which functionalities are to be further invested in, whereas others require firm decisions to sunset certain features and have a significant impact on both inbound and outbound product management.

Tools for Metering, Analysis & Visualization

Identifying the right metrics to be measured is essential, but the next step to using them for analysis is the primary goal of the paper. Multiple tools help better visualize data and support analysts in drilling down to the required levels. Standard business tools used to visualize such insights are SAP Analytics Cloud, Google Analytics, etc. The presence of integration capabilities to different data sources is essential and helps seamless connection to any platform data. Once the data is available, the tools help in aggregating, exploring, and cleansing data before being sliced and diced to the granular level possible to provide an easy understanding of the data.

As a tool for Metering, numerous research is done on topics around Open Telemetry. The set of tools, APIs, and SDKs is called OpenTelemetry. Utilize it to monitor, create, gather, and export telemetry data (metrics, logs, and traces) to aid in the efficiency and behavior analysis of the application. There are enterprise application services in cloud platforms that facilitate the aspects of functional usage measurement, like Metering-as-a-Service in the SAP Business Technology Platform. The SAP BTP domain model is supported by the Metering service's configurable use document structure, enabling custom dimensions for more robust reporting features. Metrics, such as hours utilized, API calls, visits, unique users, storage, number of documents, etc., are the fundamental measuring units that show your service use. For the SAP Metering service to generate consumption statistics and, if necessary, a billing invoice, the use submitted to them must precisely represent your metrics.

Conclusion

The concept of placing the product at the center of all corporate operations is examined in product-led growth. When taking into account Business to Business Product Management situations, this creates even more steering capabilities. It makes a product's functionality the focal point of discussions, including design, marketing, engineering, sales, and customer success. To make wise expenditures for the product roadmap, it is crucial to guarantee user behavior about how the product is utilized. License or consumption metrics are determined for each product based on that product's Stock Keeping Units (SKUs). At the same time, functional usage measurement, which may offer a thorough analysis of a product and how users utilize its features, is frequently given less attention. A product's functional usage measurement can assist in prioritizing features and determining future investments. It can also assist other business units, such as Presales, Marketing, and Customer Success, in starting data-driven conversations with customers about potential future upskilling opportunities. This study examines functional utilization assessment and how current industry practitioners might use it to inform long-term product strategy decisions.

The paper discusses the concept of functional usage measurement and how it can be used to make data-driven decisions in product strategy. The paper argues that focusing on functional usage measurement can provide a more detailed evaluation of a product and how consumers use its features in reality, which can help clarify feature prioritization and investment. The paper also suggests that other business units can use functional usage measurement, such as presales, marketing, and customer success, to initiate data-driven conversations with customers for future upsell opportunities.

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