Cracking the Behavior Code

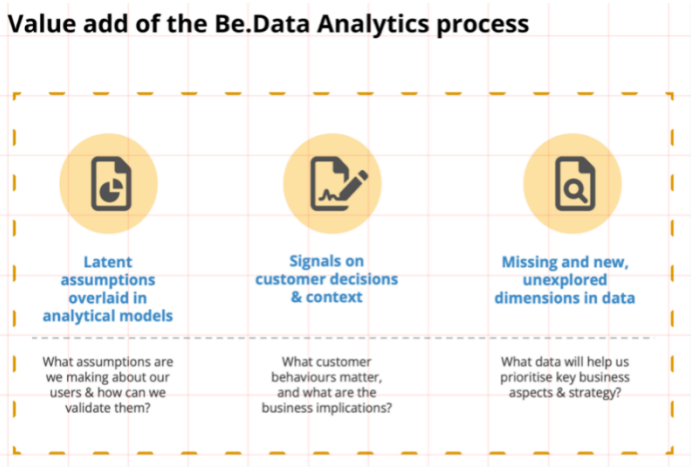
Real-World Applications of Behavioral Data Analytics

Leveraging data for meaningful and actionable insights is the key to driving decision intelligence and building competitive advantage in this age of digital transformation.

Our conversations across Fortune 500 organizations reveal that the approach to driving Decision Intelligence remains a critical challenge in 2024. Our experience tells us that the key reason for this is an incomplete and arcane approach to data sense-making and storytelling. This is why even today, A majority (79%) of knowledge workers reported that teams throughout their organizations are siloed, and 68% said their work is negatively impacted because they don't have visibility into cross-functional projects.[1]. The problem is not one of technology alone but also of approach.

We argue that insights from data become meaningful and actionable when User centricity is baked into the process from the get-go. One of the ways to do this is Behavioral Data Analytics (Be. Data Analytics).

Be.Data Analytics
It integrates the science behind human behavior with data to reveal insights on User needs and context that Businesses should be paying attention to. It goes beyond data analysis to explain the 'why' behind user behavior. It also helps in turning insights, generated from qualitative user research, into actionable business recommendations by outlining where businesses can intervene.



For an organization with large volumes of data, this approach can be further enhanced by considering interactions between humans, algorithms, and technology [2]. A Behavioral Data Science (not the same as Be.Data Analytics) approach allows organizations to detect patterns in an automated way to build scalable solutions capable of predicting user behaviour [3]. Using machine learning platforms, organisations can centralize behavioral data and create behavioral analytics capabilities. *Behavioral data science has not been covered in the scope of the current paper.*

How can you get started?

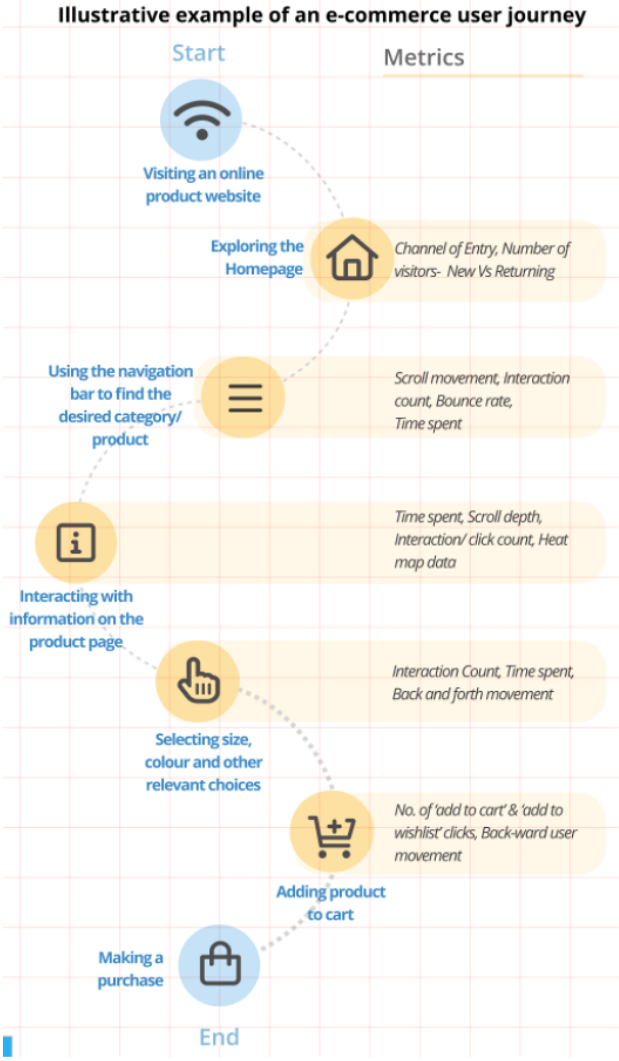
1. Define the business problem: Define the business problem by outlining the business priorities. Break the problem into smaller goals, identify the specific user behavior the business problem is tied to, and gather relevant data points. E.g., If you want to drive sales, you should look at the user's 'Add to cart' behavior.

2. Review data with a user-centric lens: Infer what the data tells us about how users behave and what matters to them through their journey. E.g., To drive sales, look at what actions users are taking on the purchase page. This can help identify possible friction points to 'add to cart' behavior.

Example of data points and corresponding user needs we can infer to address the business problem

Data	User Needs
Demographics, population descriptions	In/Out groups, social identitiy
Reward engagement, habits-repeat behaviour	Stickiness, Emotional connect
Purchase Behaviours ('add to cart' clicks, actions on purchase page	Price sensitivity, Agent intent
Intent actions, decision moments, chats & call data	Motivation, Beliefs, Goals, Mental Model
Channel movement, ecosystem movement	Context influencing behaviour (emotions, decisions, etc)

3. Situate these metrics in the entire user journey- Map out the end-to-end user journey, defining the start and end points of the desired behavior. Include all the possible actions a user can take at each step. Mark the data metrics for each action onto the user journey. Sales and engagement journeys are more apparent while other journeys can be less straightforward.



4. Hypotheses generation: List out factors that can affect user behavior and validate them through a preliminary data mapping and user research to build behavioral hypotheses. Conducting immersive research with users at this stage can provide valuable insights to refine the hypothesis framing. E.g., Lack of support on the website to understand product information and make an informed choice can affect 'Add to cart' behavior. User research can help in not only identifying this factor but also provide a direction to rectify it.

5. Data analysis: Test the behavioral hypotheses through data analysis to identify patterns and trends in user behavior. This helps to recognize what aspects of user behavior are the metrics measuring, design interventions/ solutions and inform business strategy. E.g., If the data analysis confirms that users are seeking support on the website, then the organisation can provide intuitive support on the buy page to increase 'add to cart' and hence sales.

   The story behind the data can arguably be more important than the data itself. Be.Data Analytics reveals stories on user behavior, meaningfully contextualized across touch-points.

Be.Data Analytics in Action at Fractal

Be.Data Analytics can be applied across industries (e-commerce, social media, financial services, technology, healthcare, and more) to:

- Drive acquisition/adoption
- Improve customer engagement
- Prevent churn
- Inform product development
- Personalize user experience
- Inform A/B testing

Analyzing user experience through Be.Data Analytics provides the opportunity to gain real-time feedback from users to design informed solutions. From Fractal's past work with Fortune 500 companies, we share three case studies focused on driving engagement and purchase, where we have leveraged Be.Data Analytics:

1. Redefining Customer Segmentation

APPROACH

A multinational bank intended to increase the adoption of its Autopay feature amongst credit card holders, at risk of delinquency. Current adoption rate was very low at 0.0002%. To identify behavioral patterns and build hypotheses, analysis was conducted on:

- Transaction behaviors
- Credit scores
- Shifts in available balance
- Autopay conversion

INSIGHTS

Through our analysis, we made the following key discoveries:

1. Credit scores are not the most accurate indicator of user needs, contrary to the typical approach to customer segmentation. While credit scores provide a long-term composite view, payments are a moment of decision-making situated in a customer's immediate context. By examining behavioral intent tied to data markers, we better understood the contextual factors that drive customers to enroll in Autopay.

2. We uncovered two key behavioral insights:
a. Customers wanted control and flexibility in payments based on the Autopay enrolment-to-Autopay edit ratio. Multiple attempts by users to modify the features of Autopay indicated their desire for customization, suggesting a need for adaptable payment options.
b. Financially stressed customers are more inclined to enroll in Autopay, primarily due to the bank's offer of waivers during payment resolution calls. This finding highlights a sense of reciprocity, where customers perceive the enrollment as a reciprocal gesture following the bank's support during their financial challenges.

VALUE ADDITION

By identifying customer behaviors in data for Autopay rejection, we identified four distinct behavioral segments: Heuristic Payer, Procrastinating Payer, Controlled Juggler, and Stressed Juggler. We then crafted personalized communication strategies for each segment. Unlike traditional communication on Autopay enrollment that solely focuses on economic benefits, our behavioral lens allowed us to tailor the communication to address the emotions these segments experience by identifying the dominant cause of rejection including: Autopay is irrelevant, Autopay is annoying, Autopay is rigid, Autopay is risky. Testing showed significant impact, underscoring the value of a behavioral lens in communication. Ongoing investigation and experimentation keep our strategies effective and responsive to evolving customer behaviors.

2. Relooking at User Engagement Metrics

APPROACH

A prominent marketing insights platform sought to boost content engagement but faced challenges given the limitation of its data analytics model to explain varying levels of user engagement. This lack of user-centric insights made the editorial team rely on subjective and anecdotal interpretations, hindering their data-driven strategy. To address this, we conducted a comprehensive analysis, including a review of available data, website flow, competitor analysis, and literature review to identify potential factors that influenced engagement with the content, as well as any barriers that may have impeded it.

Visualizing the user journey helped us map users' experience of engaging with the content and the website. Analysing external factors such as user needs and the mindset with which users approached the website allowed us to map their reading patterns and inform content strategy accordingly.

INSIGHTS

1. Limited User Journey: The data analysis uncovered that users had a short-lived journey on the platform, with the majority leaving within 10 seconds. While amplification (“push”) efforts generated high traffic and initial engagement, users quickly disengaged and dropped off. In addition to “push” efforts, the business strategy needs to include “pull” access to ensure returning users build an emotional connection with the platform and initiate engagement. One way of doing this is by clarifying the value proposition of the platform and aligning it with the goals of the user.

2. User context and information needs: Different users approached the content with distinct mindsets, e.g., a user who is looking to stay on top of market trends is looking to 'monitor' content as compared to others who might be seeking new ideas/approaches to looking at a problem are reviewing content with 'exploring' or 'searching' mindset. Content should align with users' specific information needs based on their daily lives, roles, responsibilities, and goals to increase engagement. Mapping out users' larger lifecycles and validating them with secondary research provided insights into their behavior and motivations to understand the short-lived journey on the platform.

3. Segmentation of User actions: The engagement rate (ER) proved inadequate as it grouped different actions user performed on the site under a single metric. To gain a more accurate understanding of engagement, user actions on the platform needed to be segmented based on what they indicated about user behavior and hence user engagement. While it is difficult to capture the richness of user context in metrics, an attempt can be made to account for this by defining the metrics in terms of the user behavior.

VALUE ADDITION

By integrating data analysis with an in-depth understanding of marketer behavior and context, we created a strategy framework and recommendations that revealed limitations of the data model and how existing data was made more actionable. Importantly, this framework creates a foundation on which other marketer behavior can be analysed.

Through meticulous Be.Data analysis, we delved into the intricacies of user patterns and trends, moving beyond mere event tracking. Armed with the right data and a model enriched by user insights, we gained a comprehensive understanding of what constitutes an engaged user, what content holds relevance for them on the platform, and the nature of their relationship with the platform itself. These trends and patterns can have significant real-world implications by continually identifying and iteratively testing.

CONCLUSION

Our argument is that adding a User Centric lens to the data analytics process right from the start is the key to making insights from data both meaningful and actionable. Be.Data Analytics uncovers compelling narratives of user behavior, decoding behavior patterns and enhancing data usability to make data-driven decisions.

While technology and data play crucial roles as enablers, enhancing the customer experience is an ongoing journey rather than a one-time solution. We are proposing a broader conversation driven by the need for a shift in how we analyze data and approach data storytelling in organizations. This process is unique to each organization and requires continuous iteration and evaluation.

Data-driven decisions are only as effective as the understanding we have of the people behind the data. Unlock the true potential of data by placing the User Centric lens at its core - where insights become action, behavior turns into understanding, and organizations thrive through the unbreakable bond they create with their valued customers.

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fractal experience

Fractal experience brings together Design and Behaviour Science to solve AI, Analytics and Data problems through a unique understanding of the user – the context, beliefs, and mental models that affect the decision-making process.

What do we bring to the table?

A uniquely skilled team with diverse backgrounds that can handle challenges in various services our solutions are created to work across a host of problems in the organization, while deepening engagement with the relevant users.

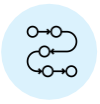

Business Strategy


Design Systems


Behaviour Science

User Experience & Interface Design


Information Design


Service Design

Innovate, create or solve a problem through us, or reach out to us about this paper.

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