# DECIBEL

# The Science Behind the Digital Experience Score (DXS®)

Abridged Version

# Contents

## MEASURING THE DIGITAL CUSTOMER EXPERIENCE

n today's market, providing the best customer experience makes or breaks the business. Savvy organizations have recognized this and made the online customer experience a core strategic imperative - creating internal teams and critical KPIs directly aligned to CX performance to drive growth for their company.

The benefits for those organizations that deliver a consistently strong customer experience across all channels (web, mobile and app) are immense. Customers who receive a great online experience are 2x more likely to purchase, buy 90% more frequently, spend 60% more per purchase and are 4x more likely to refer the brand.

Delivering on this imperative goal is a different matter. Historically, digital customer experience has been a challenge to evaluate objectively, or measure at scale. Digital metrics like bounce rates and conversion rates in themselves do not tell the story about how visitors are actually engaging with your websites and apps, and why. As experience is personal and qualitative in nature, it has been hard to quantify. Until Decibel.

Decibel is the only analytics software that automatically scores every online user experience to identify and prioritize the most urgent experience issues impacting conversion, sales and loyalty. World's largest brands leverage Decibel's AI to expose what is really happening on their websites and apps, and optimize their digital properties accordingly with an advanced set of industry-leading forensic tools.

At the core of Decibel's technology is the Digital Experience Score (DXS®) the world's first objective, science-driven, universal metric that quantifies customer experiences across websites and apps. Founded in data science and powered by machine learning, Decibel's proprietary algorithms process hundreds of smart digital interactions to measure and quantify online customer experience on a scale of 0-10. Digital teams rely on DXS to prioritize optimization efforts, benchmark performance, and measure success.

# How the Digital Experience Score is Calculated

The Digital Experience Score is the collection of every customer interaction across each digital property rolled up into one comprehensive score.
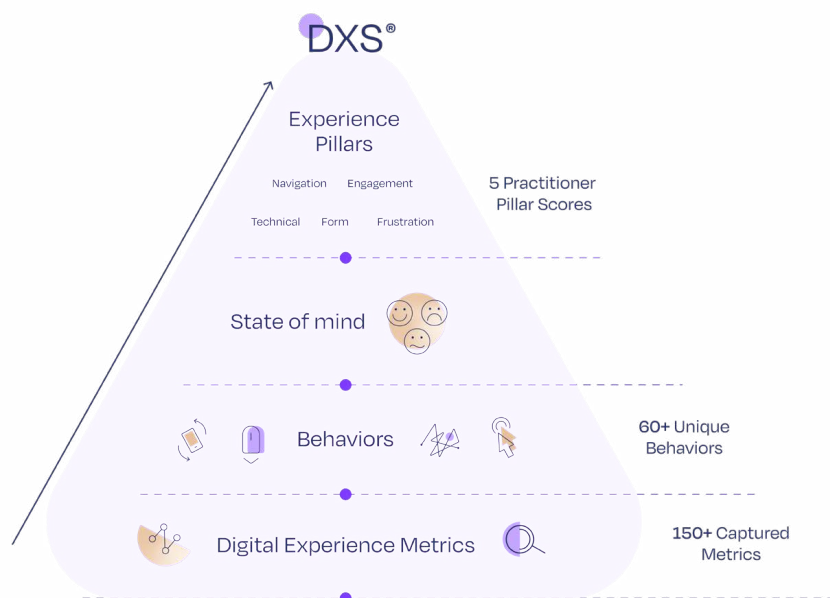


Our world class algorithms take these interactions then analyze with over 150 metrics, across 60 behaviors, that roll up to our 6 core experience metrics. Having pioneered this approach in the digital experience analytics market, Decibel now hosts the richest set of enhanced experience data in the world, resulting in the highest accuracy of machine learning models.

# Experience Data

For over 6 years Decibel has been capturing massive quantities of unique experience data from the world's most successful brands that cover every action happening on their websites and apps. This serves as a foundation for Decibel's renowned machine learning models that identify behaviors and map experiences to uncover visitors' state of mind including frustration, engagement and/or confusion.

To get to the "actual" user experience and discover how and where the customer navigates and interacts with the website, Decibel goes well beyond tracking mouse clicks. We bring together both what users experience (i.e. the content, load times, pop ups, and errors), and how they interact with it (i.e. how they move their mouse, when they click, pinch or tap, how they scroll, and much more) -- all the while associating these events with the underlying context of the pages being viewed.

# Digital Experience Metrics

To reveal hidden insights and behavioral patterns, Decibel then derives smart digital experience metrics. These include behavioral metrics (e.g. mouse distance linking the coordinates of the different positions of the mouse, mouse speed relating mouse distance with time, scroll direction measuring the differences of the page position within the browser's viewpoint, focus rate as the ratio between focus time and total duration) and technical metrics (e.g. browser and server load time, user connection, user tab management). These metrics together contribute to an accurate story about user experience.

| Focus Rate | Mouse Distance | Focus Time | Scroll Direction | Load Time |

# User Behaviors

To continue building the user experience story, Decibel unpacks interesting, meaningful insights from the mass of data collected. This involves gaining intelligence from within the unique interaction metrics we track and finding patterns in the digital language we observe. These patterns are folded into "behaviors" that help define what makes a good and a bad experience. Identifying and qualifying user behaviors at Decibel is done with the help of machine learning.

We spent the last 6 years tirelessly training, retraining, and refining the machine learning models to accurately distill these behaviors in the most challenging and confusing situations. Here are six of the most intriguing behavioral patterns – both positive and negative – derived from over 7.7 billion user sessions analyzed by Decibel's data science team.

## 6 Intriguing Behavioral Patterns:

| Behavioral Pattern | What is it? | Devices | What does it measure? | Value |
|---|---|---|---|---|
| Multi-Click | Users rapidly click or tap on an on-page element | Desktop, Tablet, Mobile | Frustration | To locate and fix friction in the customer journey |
| Reading | Users follow on-page content with their mouse | Desktop | Engagement | To inform content strategy |
| Bird's Nest | Users rapidly dart the cursor around, resulting in jumbled trail | Desktop | Confusion, Frustration | To locate and fix frustrations in the customer journey |
| Scroll Engagement | Users scroll up and down in a smooth, regular rhythm | Desktop, Tablet, Mobile | Engagement | To inform strategy, and for compliance purposes |
| Select and copy | User selects text and copies it | Desktop, Tablet, Mobile | Engagement | To inform content strategy, and for compliance purposes |
| Device Rotation | User rotates device rapidly over a short period of time | Tablet, Mobile | Frustration | To inform content strategy, and locate issues arising from responsive design |

# The Five Pillars
# of Digital Experience

Decibel derives hundreds of indicators that help build the complete picture of the user experience, and ultimately assign the DXS. Every pageview will have a score and every session's experience will be measured.

The five experience pillars diagnose the distinct areas that require most attention. Focusing on improving the scores of each experience pillar –Navigation, Frustration, Engagement, as well as Technical and Form experience – is the most effective way to improve experiences on websites and apps.

## 1. Engagement Score

The Engagement Score evaluates distinct behaviors along with subtle engagement metrics that indicate likelihood of conversion. A user actively navigating through the website and hovering over content, pausing to trace copy with their cursor and zooming in on mobile devices is displaying a high level of engagement. On the contrary, issues like low focus and interaction time will penalize the engagement score. We recognize that every page serves a different purpose and includes different layouts and content, so each page is analyzed with the context and purpose in mind.

Knowing which aspects of digital properties are the most engaging (and which areas are underperforming) gives digital teams specific areas to focus on. Through multivariate testing, Decibel's clients identify the most engaging versions of their websites and continually optimize them for the best possible digital experience.

## 2. Frustration Score

Frustration is a key indicator that a customer may abandon a purchase – or worse – abandon the relationship for good. The Frustration Experience Score points to the exact pages and elements that are causing the most friction. Through session replays and heatmaps, digital teams can evaluate the exact behaviors driving the frustration score and fix the issues losing you customers.

To receive a score indicating low levels of frustration, navigating the website should be smooth and predictable thanks to intuitive layouts, responsive elements and clear information. The score is penalized for unresponsive clicks, very fast mouse moves and very fast scrolling, bird's nest behavior, unresponsive multiclicks, and repetitive frustrations.

- Engagement Score
- Frustation Score
- Thecnical Score
- Form Score
- Navigation Score

Engagement Score

Frustration Score

Technical Score

Form Score

Navigation Score

### 3. Technical Experience Score

Technical Experience Score is the measurement of the page performance, regardless of the user activity. To receive a score indicating an excellent technical experience, every element of the website page should load promptly without errors, be responsive for all devices, and perform as expected when a user interacts with it. The score will reduce otherwise.

Decibel understands how critical it is to have friction-free interactions across your digital properties in this competitive environment. Any issues such as slow load time, Java Script errors or responsiveness are instantly flagged up to the technical teams who can take action.
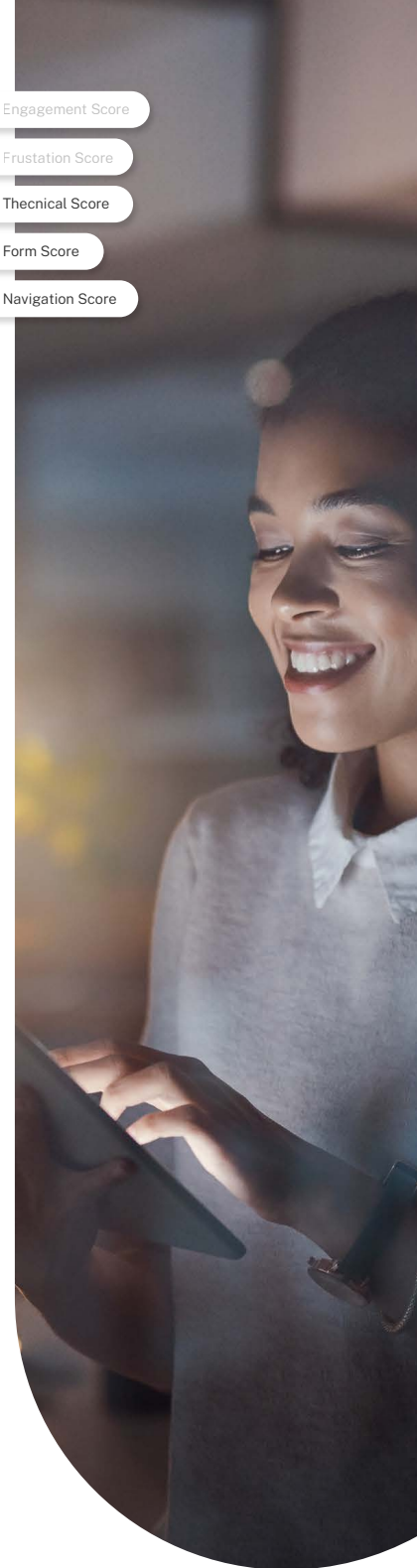
### 4. Form Experience Score

The Form Experience Score calculates the ease and usability of interacting with the forms and is measured on two levels; the overall Form Experience Score, which is an average of all the forms on the site, and a score for every individual form. Errors on form submissions, repetitive form field interactions, and form abandonment will negatively affect the Form Experience Score.

Forms can single-handedly make or break your conversion numbers. Poorly performing forms also erode trust in a brand and negatively impact customer loyalty and lifetime value. Decibel pinpoints to the exact forms and fields that have caused a problem, so the technical teams know precisely where to focus optimization efforts.

### 5. Navigation Score

Navigation Score is calculated as a user browses different pages of the website, and therefore is a session-based pillar. To receive a high navigation score, moving around the website and finding information should be as frictionless as possible. Using the browser's back and forward buttons, repetitive form interactions, looping behavior, and others will penalize the score.

Without Decibel, navigation problems are difficult to expose, especially at scale. Decibel highlights the issues and allows you to segment the navigation score across different parameters for a faster fix.

# The Digital Experience Score

The Digital Experience Score is the culmination of the analysis of the user experience calculated across the 5 diversified experience pillars.

DXS is an extremely versatile, context-aware, adaptable metric that takes into account the specifics of the website or app, and the components of the user session. It is fed by the five weighted pillar scores and their combined impact on the user's individual journey. It is a score between 0 and 10, 10 being an absolutely perfect, joyful journey for the user, on a fast-loading website, where all the content in the session is consumed with ease, the navigation is smooth, and the checkout is seamless and fast. DXS powers Decibel's prioritization engine which tells you exactly which issues are most critical, so you can prioritize improvements.

DXS equips companies with the way to benchmark experiences online. It can be tracked over time as a key performance indicator across digital properties. It is also a proven predictor of revenue and conversion through numerous validation studies. Indeed, providing good experiences to customers online establishes trust, increases brand loyalty, encourages repeat business, and ultimately increases market share, conversion and revenue. A high DXS, therefore, means the company is ripe for growth – and driving more traffic with, say, digital advertising campaigns, is a sensible investment. A low DXS, meanwhile, suggests advertising spend will be wasted: customers will arrive, have a bad experience, and not return. Resources would thus be better spent on optimizing on-site and in-app experiences.

Figuring out where to focus your efforts is no longer a challenge. Decibel does all the heavy lifting to provide an unrivaled, unprecedented, and automatic pathway to website and app success. Finally, a technology that cracks the code to online conversion. Optimizing online user experience has never been this easy.

> 66 Decibel provides the ability to explain the underlying reason why we are seeing a certain performance [on our website]. It gets you to a much more granular level than any other analytics solution would ever allow you to do. It allows you to measure the experience that is happening in between clicks and in between pages which is not possible through traditional analytics.
>
> *TUI - Tom McCarthy - Digital Analytics Manager*
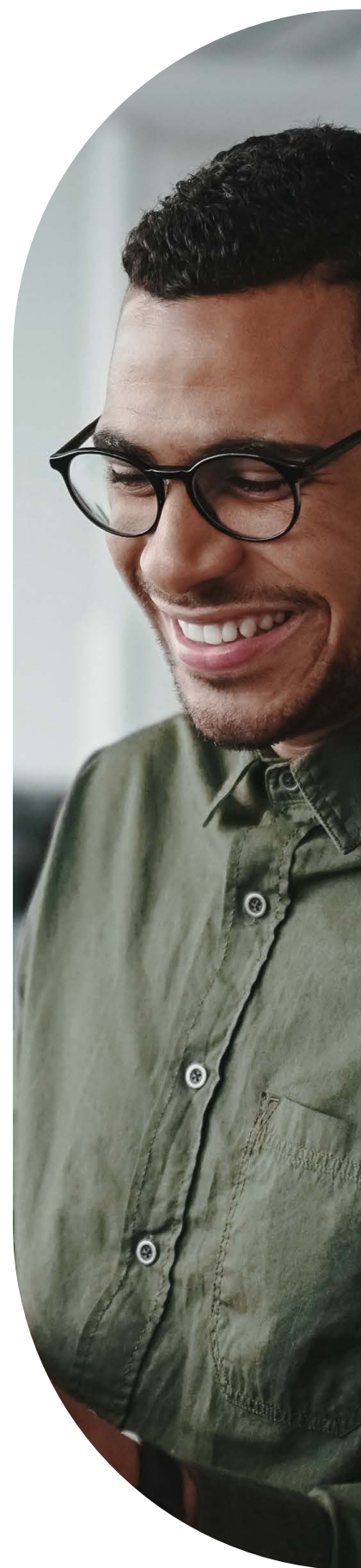
# ¨DECIBEL

Decibel is the only analytics software in the world that can automatically identify, score and prioritize every online user experience impacting conversion, sales and loyalty.

Want to learn more?

Visit **Decibel.com**