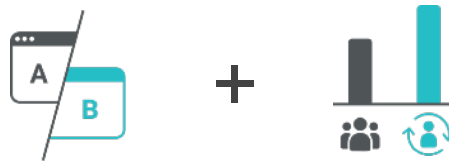




# A/B Testing for Revenue and LifeTime Value



## Executive Summary

This is a review of the existing research on LifeTime Value (LTV), User Experience (UX) and the behaviour of returning customers. It makes the case for incorporating LTV metrics into A/B testing as an important goal, alongside revenue metrics. To make this case we start by investigating:

- How returning customers are often more valuable than revenue from one-off transactions.
- Which factors determine the loyalty of returning customers. Plus the gaps between traditional Customer Experience (CX), and modern approaches to UX and Conversion Rate Optimisation (CRO).
- The most common pitfall for many businesses who have CX and/or UX resource, yet struggle to realise the value of combining them with CRO.

Without these points above, it is possible to follow all the best practices for LTV testing and still not get a strong return. After all, identifying which parts of a website are lacking, and why, is essential for improving LTV. In the second half of this research review, we explore the details of LTV testing:

- Why lifespan is the most valuable LTV variable and the technical limitations of testing lifespan.
- How to identify which metrics can be used as proxies for lifespan, and are measurable within a testable timeframe.
- How all the points we address come together to help make a compelling business case for testing metrics other than just conversions, in order to maximise returns.

## Value of Conversions vs Return Customers

Many online businesses rely on subscriptions or repeat purchases. Businesses often begin A/B testing with a focus on clicks of key CTAs and pageviews of key pages. Eventually, they narrow in on actual conversions to try increase subscriptions and purchases, but most don't move on from there.

The problem? The first conversion is only the beginning of many customers' journeys, and the profitability of return customers tends to follow the 80:20 rule. There is a clear trend in available research on the relative value of return customers:

- On average, 15% of online customers return, accounting for 33% of revenue. This makes them 2.9x more valuable than one-off customers (average from study of 100,000 online businesses).<sup>1</sup>
- Return visitors add-to-cart 65% more, convert 73% more and spend 16% more per transaction.<sup>2</sup> In another study, return customers spent 67% more than new customers.<sup>3</sup>
- Return customers are at least 5x cheaper to retain than new customers are to acquire.<sup>4</sup>
- Reducing customer churn by 5% can lift profits by at least 25%.<sup>5</sup>



<sup>1</sup> <https://www.yotpo.com/blog/customer-loyalty-data/>

<sup>2</sup> <https://www.barilliance.com/new-vs-returning/>

<sup>3</sup> <https://www.business.com/articles/returning-customers-spend-67-more-than-new-customers-keep-your-customers-coming-back-with-a-recurring-revenue-sales-model/>

<sup>4</sup> <https://hbr.org/2014/10/the-value-of-keeping-the-right-customers>

<sup>5</sup> [https://media.bain.com/Images/BB\\_Prescription\\_cutting\\_costs.pdf](https://media.bain.com/Images/BB_Prescription_cutting_costs.pdf)

## Return Customers' Effort and Loyalty

As we've touched on, optimising for return customers is valuable, but it's largely untapped by most businesses (more on that later). To know what design changes to actually test, we first need a better understanding of the causes and effects of customer loyalty:

- 71% of customers want to resolve most issues on their own.<sup>6</sup>
- As a result of being loyal to a business, 78% reported they spread word-of-mouth, 69% buy again and 54% don't consider buying from other businesses.<sup>7</sup>
- Online customers report 'quality experience' (88%) and 'customer service' (72%) as being more important for loyalty than price (50%).<sup>8</sup>
- 94% of customers who reported a low-effort experience expressed an intention to repurchase, and 88% were willing to increase their spending.<sup>9</sup>
- The ability to easily complete an intended task on a business' website is more closely correlated to repeat purchases and revenue than how likely a user is to recommend said business.<sup>9</sup>
- 57% of customers felt their loyalty decrease when they had to switch from a website to a phone call to complete an intended task.<sup>9</sup>

Historically, businesses improved customer experience by focusing on stressful customer touchpoints and waiting times. As such, it is easy to find research that links customer experience, lifetime value and return on investment.

Today, many businesses are struggling in the digital marketplace because scaling online support is expensive. As a result, many businesses have turned their focus to acquiring new customers (at a cost) instead of benefitting more from existing customers. There is an opportunity for user experience (UX) and conversion rate optimisation (CRO) to help more customers resolve their own issues easily, and grow their loyalty as return customers.

---

<sup>6</sup> <https://www.singlegrain.com/customer-retention/how-to-use-ux-testing-to-improve-customer-lifetime-value-clv/>

<sup>7</sup> <https://insightscenter.realeself.com/infographic-friday-loyal-patient-doctors-best-friend/>

<sup>8</sup> <https://www.zendesk.com/blog/loyalty-rewards/>

<sup>9</sup> <https://hbr.org/2010/07/stop-trying-to-delight-your-customers>

## Combine UX and CRO Effectively Before Testing

Too often, A/B testing is sold to people as an easy-to-do side-project that can be done by in-house marketers and designers. Most businesses who try quickly realise they need more developers and/or digital analysts to maximise their returns. Here are the most common reasons why UX professionals struggle to optimise conversion rates and lifetime value.

- About 80% of UX professionals map user journeys using qualitative personas and scenarios, yet less than 20% include metrics and insights.<sup>10</sup>
- 55% of marketers don't have the budget for research or access to data, knowledge or insights needed for decision-making.<sup>11</sup>
- User journey mapping fails when professionals lack questions/hypotheses (36%), don't have the ability to access relevant data (15%), and can't get buy-in (11%).<sup>10</sup>
- 24% reported that journey mapping helps to uncover qualitative insights, yet 25% reported a lack of grounding in quantitative reality.<sup>10</sup>
- Only 13% reported that journey mapping was valued because it produced measurable results. Most reported that it was mainly useful for aligning on vision and goals.<sup>10</sup>
- The amount of time that programmers spend on rework that is avoidable is close to 50%.<sup>12</sup>

It is easier to get buy-in for A/B testing than UX design because testing is predicated on metrics and statistical analysis. However, digital analysts are needed to objectively identify opportunities and segment results for deep insights. And designers and developers need to collaborate so that designs are actually feasible for testing tools and website systems.



Tracking key events  
and customer data



Segmentation for  
customer insights



Help customers  
solve their issues



Feasible for testing  
and implementation

<sup>10</sup> <https://www.nngroup.com/articles/journey-mapping-ux-practitioners/>

<sup>11</sup> [https://www.schermer.co/wp-content/uploads/2019/06/SCHERMER\\_The\\_State\\_of\\_B2B\\_Marketing\\_Decision-Making\\_2019.pdf](https://www.schermer.co/wp-content/uploads/2019/06/SCHERMER_The_State_of_B2B_Marketing_Decision-Making_2019.pdf)

<sup>12</sup> <https://www.usability.gov/what-and-why/benefits-of-ucd.html>

## Optimising LifeTime Value (LTV) via A/B Testing

We've seen a need to combine UX and CRO, and the return customer journey is an ideal candidate to apply them to. The LifeTime Value (LTV) of a customer is typically calculated by multiplying three variables:

- Average number of transactions per month
- Average transaction value
- Average lifespan of customer in months

When A/B testing, it is easiest to set the number of transactions as your primary goal, and assume that transaction value and lifespan remain relatively constant. However, for a number of reasons, this is not appropriate when optimising LTV:

- The assumption described above helps in theory, but does not hold up in reality.
- Multiple studies have shown that lifespan is the #1 most influential variable. You can up-sell, cross-sell, bundle products and give discounts to improve transactions but this influences customer lifespan far less than offering a premium experience.
- CRO professionals report that, upon acquiring new customers, making a connection with them is primarily what increases LTV.
- Improving customers' ongoing experience offers many additional benefits like positive word-of-mouth, lower customer acquisition costs, competitive advantage, etc. Most of these are hard to measure and only make an impact after several months, so we don't see them when measuring changes in LTV.

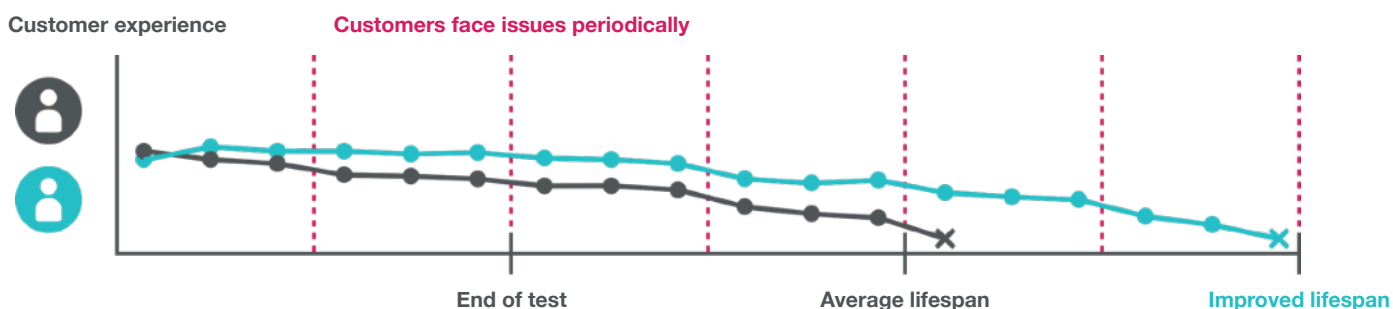
Lifespan is arguably the most valuable variable when optimising for LTV. To see how a test impacts customer lifespan, it would need to run for longer than the average lifespan, which can be several months. Even if we had a massive number of users on a website, if we ran a test that reached statistical significance in 2 weeks, we'll probably only see changes in customer lifespan due to events that occurred long before the test. So, what can we do?

## A/B Testing to Optimise Customer Lifespan via Proxy Metrics

We've identified that customer lifespan is a valuable metric to optimise, and that testing requires shorter-term metrics that correlate with customer lifespan. We've also identified some experience-based factors that correlate with behaviours of long-life customers. There are a number of measurable behavioural changes that occur during tests, that can predict whether the lifespan of customers in tests will be relatively long or short:

- The rate at which customers begin interacting with contact forms to email support staff.
- The average number of pageviews required per action completed (after logging in, if appropriate). This can include switching plans, customising settings, updating account information.
- The rate at which customers interact with customer service chatbots, but then do not successfully complete an action or click on a suggested link. Alternatively, customers may then continue looking for information on several help/FAQ pages.
- The rate at which customers visit key pages that contain valuable or new content. For example, engaged subscribers on a site that offers premium recipes will spend more time on various recipe pages and find latest releases.
- The rate at which customers on mobile tap certain phone number links for human assistance (unless your customer service is second-to-none).

There are dozens of viable metrics that all depend on exactly the website and customer journey you are optimising. If you're not sure how your loyal and one-off customers behave differently, segment your historical customer data by lifetime, and look for behavioural differences during their first week, month or quarter. Alternatively, segment the data into groups of customers who only completed one or two transactions before leaving, and customers who have completed more than two transactions.



## Summary of Optimising for Revenue and Lifespan Proxies

Admittedly, it is easy to default to set revenue or conversions as the primary goal for A/B tests. After all, what good is a competing design if it can't prove the value it adds? As we have seen, there is a significant amount of evidence suggesting that optimising for lifetime value is a much larger opportunity than optimising for revenue alone.

Many studies and models have explained the short-falls of assuming that lifetime value is simply a function of transaction value and volume over time. Lifespan was identified as the more valuable variable to optimise, especially when driven by improvements in experience.

We've explored how, with tests that run for less than the average customer lifespan, the behavioural changes we can measure and detect are somewhat limited. However, we've also explored how, by segmenting data to compare long-lifespan customers and short-lifespan customers, behavioural differences can be identified.

The most important behavioural differences are those that occur throughout the customer journey, not right at the end as customers are leaving. They can be measured during tests to predict whether existing customers are more likely to stick around or leave in the future.

To reap the benefits, teams will need to champion return customers and carefully build their own business case to get buy-in for optimising lifespan. The evidence we've seen suggests the following vision: Make customers' experience reliably positive and self-serving. Help customers to easily resolve their own problems and form emotional connections.

Indeed, it may be the same mantra we've heard before, but explored through a different lens. We now have a better understanding of why it's valuable, how to prove its value, and how to execute in an A/B testing environment.

We hope you find this research review insightful and thought-provoking. Deep-dives like this are inspired by Catchi's diverse experience in CRO, analytics, development, personalisation and UX. If there are other topics or problems you would like a fresh perspective on, reach out. If you didn't agree with something or would like to contribute to this discussion, we'd like to hear from you.