

# Conversion rate optimization

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In internet marketing, **conversion optimization**, or **conversion rate optimization (CRO)** is the method of creating an experience for a website or landing page visitor with the goal of increasing the percentage of visitors that convert into customers. It is also commonly referred to as **CRO**.

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## Web origins

Conversion optimization was born out of the need of e-commerce Internet marketers for lead generation and to improve their website's results. As competition grew on the web during the early 2000s, Internet marketers had to become more measurable with their marketing tactics. They began experimenting with website design and content variations to determine which layouts, copy text, offers and images will improve their conversion rate.

## Why conversion optimization

Frequently, when marketers target a pocket of customers that has shown spectacular lift in an ad campaign, they belatedly discover the behavior is not consistent. Online marketing response rates fluctuate widely from hour to hour, segment to segment and offer to offer.

This phenomenon can be traced to the difficulty humans have separating chance events from real effects. Using the haystack process, at any given time, marketers are limited to examining and drawing conclusions from small samples of data. However, psychologists (led by Kahneman and Tversky) have extensively documented tendencies which find spurious patterns in small samples thereby explaining why poor decisions are made. Statistical methodologies can be leveraged to study large samples and mitigate the urge to see patterns where none exists.

These methodologies, or “**conversion optimization**” methods, are then taken a step further to run in a real-time environment. The real-time data collection and subsequent messaging as a result, increases the scale and effectiveness of the online campaign.

## How conversion optimization works

Conversion Rate Optimization is the process of increasing website leads and sales without spending money on attracting more visitors by reducing your visitor "bounce rate". A conversion rate is defined as the percentage of visitors who complete a goal, as set by the site owner. Some test methods, such as split testing or A/B testing, enable one to monitor which headlines, images and content help one convert more visitors into customers.

There are several approaches to conversion optimization with two main schools of thought prevailing in the last few years. One school is more focused on testing as an approach to discover the best way to increase a website, a campaign or a landing page conversion rates. The other school is focused more on the pretesting stage of the optimization process. In this second approach, the optimization company will invest a considerable amount of time understanding the audience and then creating a targeted message that appeals to that particular audience. Only then would it be willing to deploy testing mechanisms to increase conversion rates.

## Elements of the test focused approach to conversion optimization

Conversion optimization platforms for content, campaigns and delivery, then need to consist of the following elements:

### Data collection and processing

The platform must process hundreds of variables and automatically discover which subsets have the greatest predictive power, including any multivariate relationship. A combination of pre- and post-screening methods is employed, dropping irrelevant or redundant data as appropriate. A flexible data warehouse environment accepts customer data as well as data aggregated by third parties.

Data can be numeric or text-based, nominal or ordinal. Bad or missing values are handled gracefully.

Data may be geographic, contextual, frequencial, demographic, behavioral, customer based, etc.

### Hypothesis

After data collection, forming a hypothesis is the next step. This process forms the foundation of why changes are made. Hypotheses are made based on observation and deduction. It is important that each hypothetical situation be measurable. Without these no conclusions can be derived.

### Optimization goals

The official definition of “optimization” is the discipline of applying advanced analytical methods to make better decisions. Under this framework, business goals are explicitly defined and then decisions are calibrated to optimize those goals. The methodologies have a long record of success in a wide variety of industries, such as airline scheduling, supply chain management, financial planning, military logistics and telecommunications routing. Goals should include maximization of conversions, revenues, profits, LTV or any combination thereof.

## Business rules

Arbitrary business rules must be handled under one optimization framework. Some typical examples include:

- Minimum (or maximum) weights for specific offers
- “Share of voice” among all offers
- Differential eligibility for different offers
- Mutually exclusive offers
- Bundled offers
- Specified holdout sample

Using such a platform entails that one should understand these and other business rules, then adapt targeting rules accordingly.

## Real-time decision making

Once mathematical models have been built, ad/content servers use an audience screen method to place visitors into segments and select the best offers, in real time. Business goals are optimized while business rules are enforced simultaneously. Mathematical models can be refreshed at any time to reflect changes in business goals or rules.

## Statistical learning

Ensuring results are repeatable by employing a wide array of statistical methodologies. Variable selection, validation testing, simulation, control groups and other techniques together help to distinguish true effects from chance events. A champion/challenger framework ensures that the best mathematical models are deployed always. In addition, performance is enhanced by the ability to analyze huge datasets and to retain historical learning.

## See also

- Audience screen
- Behavioral targeting
- Conversion Marketing
- Conversion rate
- Direct marketing
- Internet marketing
- Split testing
- Multivariate testing
- Promotion
- Digital marketing engineer

## References

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