

The MediaMath Brain algorithm uses advanced machine learning techniques to determine which impressions will best meet an advertiser's goal, and how much to bid for each impression.

Like a human brain, there are two parts to the MediaMath Brain algorithm – the Left Brain and the Right Brain.

80 Billion Opportunities per Day

The TerminalOne Brain completes the following process for each opportunity every day

THE LEFT BRAIN

The Left Brain analyzes historical data specific to a given T1 Advertiser – evaluating all the combinations of media, user, and creative variables. It does this so it can predict the probability of any impression to achieve the advertiser's desired goal – from branding to engagement to purchase to loyalty.

FOR EXAMPLE:

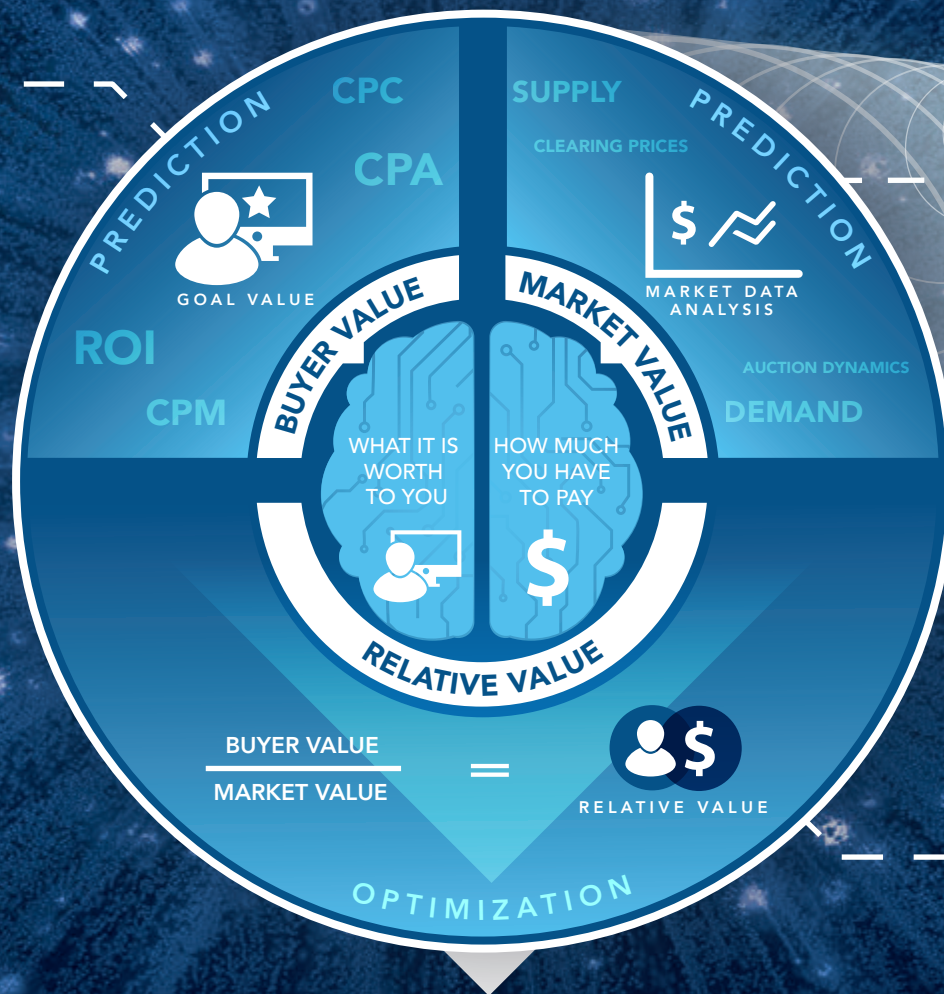
An impression to a consumer on a news website at 9am on a Monday in New York might have a different probability of leading to a purchase than an impression to another consumer on a sports website at 8pm on a Saturday in Denver.

The Left Brain then combines that probability with the Advertiser's goal value as entered in T1, to determine the price to bid for each impression.

FOR EXAMPLE:

If an impression has a 1% chance per thousand impressions of achieving an outcome that is worth \$100 to the Advertiser, the bid would be \$1.00 CPM.

Since the probability and value of the outcome both depend on the Advertiser, every Creative of every Campaign of every Advertiser in T1 will have a different Left Brain prediction of what each impression is worth.



THE RIGHT BRAIN

The Right Brain predicts the price at which each impression is predicted to clear. Unlike the Left Brain, it's not specific to any single Advertiser – it depends on the competitive dynamics of the marketplace as a whole. The Right Brain models how different combinations of variables result in different clearing prices.

FOR EXAMPLE:

Impressions in California on a large web portal on a weekday evening will clear at a different price than impressions in the UK on a financial website on a weekday morning.

RELATIVE VALUE

Working together, the Left and Right Brain calculate Relative Value. The Left Brain tells us what an impression is worth to a particular advertiser and the Right Brain tells us the price at which it will clear. The ratio between these is called Relative Value. This is what determines the best impressions to bid on, as well as what price to bid -- measuring how much bang an Advertiser gets for their buck.