MARKETING EXPERIMENTS

IN AN AGE OF ACCOUNTABILITY

How to hypothesize like a scientist, build a culture of innovation, and test and optimize your way to successful engagement marketing

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ACCOUNTABILITY AND EXPERIMENTATION LIVING IN HARMONY

Galileo dropped two stones weighing different amounts from the Leaning Tower of Pisa in order to prove that objects fall at the same speed. Isaac Newton proved his theory that light is made up of different colored lights by shining sunlight from his window onto a prism of glass to split it into a rainbow of colors. Ivan Pavlov proved that our behavior could be conditioned by testing the reaction of dogs to food and bells.

Why experiment?

Experiments like these prove and disprove ideas about our world that help us arrive at the truth. The scientists behind them share a sense of exploration, curiosity, and scientific rigor. They're great inspiration for today's fearless marketer.

"You can't do marketing without experimentation." —Matt Heinz, President, Heinz Marketing. "What worked previously starts to deteriorate as buyers' habits change, interests change, and markets change. Experimentation is the process of continually finding what best practices work for you, allowing you to repeat them with predictable performance, and drive results."

By definition, an experiment is a procedure carried out to support, refute, or validate a hypothesis. Experiments provide insight into cause-and-effect by demonstrating what outcome occurs when a factor is manipulated. It's because of experimentation that we share a common understanding of the world around us.

But experimentation is not limited to science class, or the field of behavioral psychology. It's critical for marketing teams to adopt experimentation in order to continually improve, especially when we are operating in a time when organizations are looking for CMOs to prove results. Accountability matters. To thrive in these times, marketing teams need to balance that responsibility with a culture of curiosity, and continual experimentation.

The age of marketing experimentation is here.

What's more, every industry is operating in a time of continuous, rapid change.

Unfortunately, many organizations don't know how to deploy scientific tests correctly in the marketing process. When asked how they design

and deliver customer experiences, less than half of marketers indicated their design approach is iterative.[1]

Many others fail to create the right kind of environment to encourage curiosity and experimentation.

In a recent survey, only about 24% of employees reported feeling curious in their jobs on a regular basis, and about 70% said they face barriers to asking more questions at work.[2]

"One of the most important things that a future manager should learn is how to do proper controlled experiments." —Byron Sharp[3]

This ebook is a guide to scientific acumen and curiosity for fearless marketers. It's meant to help you understand how to best utilize and foster experimentation on your teams—both for those getting started and those looking to scale.

We're passionate about this topic, because it's central to how we approach the discipline of marketing at Marketo, an Adobe company.

By continuing to refine based on test outcomes, you're in the driver's seat to deliver the best ROI to your organization. That means questioning accepted truths, testing hypotheses about the business and your campaigns, and being willing to experiment—fearlessly.

Experimentation ethos

Get inspired by this mantra for marketers who experiment:

You could always be more right

"Everything could always be a little bit better. This thinking is the same concept as investing your own money in a personal portfolio. If you do 1% better every week, imagine how you'll be doing 52 weeks from now!" —Mike Madden, Head of Demand Gen, Commercial, Marketo

Process matters

Hold yourself accountable to the experimentation process. Implement a level of scientific rigor to experiments. Read on for a primer on the scientific process.

Does it scale?

Experiments are intended to improve long-term results. Each one you do should inform future behavior.

For example, a one-off test between two subject lines is not repeatable. You can't roll it out across other campaigns. But testing brackets at the beginning of a subject line such as "[ebook]", and proving the results gives you the ability to roll it out across all subject lines. Ask

"In this day and age, we have to become scientists."

—**Jessica Kao** Director of Client Services, Digital Pi

1 Forrester Research, "Five New Perspectives on Marketing Process" March 2018, Lori Wizdo
2 Harvard Business Review, "The Business Case for Curiosity" Francesca Gino, September 2018
3 https://www.marketingweek.com/2017/09/04/ritson-sharp/

yourself how can you templatize an element of your experiment so you can incorporate it into all future campaigns.

Let the numbers make decisions

We hear a lot about being "data-driven" these days. What that means is letting numbers make decisions—not only gut instincts. We explain p-values, and running statistically sound tests to refute bias and make decisions based on evidence and fact later in the ebook.

"Our intuition is not always right." —Matt Heinz

Live like Goldilocks

Nobody gets it right the first time. Experimentation is simply the process by which marketers find their own best practices, and what works for them.

"Think like Goldilocks. Is your campaign too hot, too cold, or just right? You won't know until you taste test each one, and this is the process for each and every campaign we run." —Alex Rynne, LinkedIn Marketing Solutions

Seek continual improvement

An experimentation mindset doesn't necessarily seek out the next big thing. Rather, it's more similar to compound interest. Seek to make iterative changes that will give you gains. Each builds upon the other over time to create significant positive change to the organization brought by experiments.

"Find new ways to produce great work. Your goal is to become fast, iterative, and coordinated across marketing disciplines and adjacent business functions."[4] —Forrester Research

Get inspired by the Japanese concept of kaizen, which encourages continuous improvement through regular, incremental changes over time.

Don't chase the wins—chase insights

Every result is an opportunity to learn something new. Even if an experiment fails, there is insight to be gained.

"Like Sherlock Holmes, we seek not to solve a problem but the mystery around it." —Vince Warnock, CMO, Cigna New Zealand

In many ways this represents a cultural shift for marketing teams (read on for tips on building a culture of innovation).

Matt Heinz recommends prioritizing "intent before precision." Your intent to find the right answer is more important than needing to have all the right answers right now.

Hold this mantra close to heart, and you'll be set to embark on a new journey of experimentation.

4 Forrester Research, "Embrace Innovative Marketing" March 2018, Melissa Parrish

The experimental marketing team

WHAT DOES A CULTURE OF INNOVATION LOOK LIKE?

Changing the behavior of employees at work means changing the culture of your workplace. To truly embrace experimentation across your marketing team, it's important to understand what a culture of innovation in marketing looks like. We identified some common traits below:

Comfort in failure

Failure is part of testing and experimentation—and key to getting ahead. It's critical to embrace failure as an opportunity, not something to be feared. Alex Rynne recommends the concept of "failing forward"—failing as part of a continual effort to improve, for the sake of being proactive (not reactive).

Always be testing

A culture of experimentation requires the understanding that if it's worth doing, it's worth testing. Every campaign you deploy, or email you initiate, is an opportunity to learn something new.

Whether you're testing mobile, account-based marketing (ABM), paid search, organic copy on the website, paid ads, or other channels, seek to test throughout your engagement strategy. A healthy culture of testing and experimentation means having experiments in-market all the time.

You can test: creative content, CTAs, copy, headlines, formatting, images, ideas, concepts, and offers. With so many elements that affect conversions in digital marketing, there's a myriad of ways to optimize what works—and remove what doesn't.

Cross-functional experimentation

No marketing team operates in a vacuum—your experimentation shouldn't, either. Teams should work closely to understand which campaigns are working, optimize, and iterate.

For example, successful teams meet every two weeks to iterate together.

Cultivating new ideas

"Fearless innovators believe great ideas are everyone's responsibility. But, fear is the biggest hurdle. We need a process to make new ideas feel safe and familiar." —Carla Johnson, Chief Experience Officer, Type A Communications

According to Carla, more than anything else, creating a culture of innovation is about teaching people how to bring new ideas into an organization. People find it hard to believe, but even the biggest and best brands kill things that could be really good. That's because bad pitches kill great ideas.

How to pitch a new idea

- Ensure the idea is valid. Establish a clear connection to how the idea contributes to a business objective. It must be something that has the potential to move the business forward.
- Pitches must bring the listener on a journey between what inspired the idea, how it relates to the brand or situation, and how you visualize things moving forward. In other words, from inspiration to execution.
- Most importantly, take time to articulate how something inspired you to come up with this idea, and how it relates to the work you do. Help others relate.

Psychological safe zones

The key to managing that risk is to create a psychological safe zone for the unknown.

"Education is a progressive discovery of our own ignorance." —Will Durant Read

This requires a corporate mindset that creates room for not having all the answers. It may sound far-fetched, but experimentation is about proving and disproving, which by normal standards is typically equated to disappointment.

"We've built a philosophy on the team, a kind of psychological safe zone, that you don't have to know everything. We agree to experiment to find out what works, and what doesn't."
—Vince Warnock

The truth is, nobody wants to be associated with a test that didn't work. Matt Heinz calls this "reputation capital." He says, "part of A/B testing is knowing that a healthy number of those tests will fail. The very concept of A/B testing implies that B is always wrong. One must win."

Thus, a culture of innovation is one where failures are seen as opportunities. Heinz recommends marketing leaders give your teams a margin of error with regards to experimentation. Though this intentionally increases the likelihood of failure, by doing so, your team can discover things that no one else has found.

Discovery inherently brings a bit of risk.

How to give feedback on an idea

If you're an executive, you've got to motivate the kind of courage that continues to come to you from your team, and that means giving better feedback. The best feedback comes in two forms:

1. "What I like"—what did you like about that idea? Acknowledge that person's courage in pitching you an idea proactively. What pieces of that idea are good and can be used?

2. "What I wish"—a different way to form feedback that changes the dynamic of your feedback. Presenting feedback in this way helps the person presenting the idea fill in the holes of what needs to be part of the structure of the idea.

Take time to tell them what you wish, and you'll train them to make every idea better after that.

WHAT SCIENTISTS AND MARKETERS HAVE IN COMMON

You don't need a PhD to be a scientist. At their core, a scientist comes up with solutions to difficult problems.

"In marketing operations, we're often doing something that's never been done before, piecing technology together to achieve results in new ways. Our job is to think outside the box to find the solution in a scientific, analytical way." —Jessica Kao

We often think of creativity in marketing as only applying to the design elements of a campaign, or clever copywriting or branding. The truth is, there is an abundance of creativity within the execution itself. How you assemble programs, campaigns, smart lists and more is inherently a creative process.

"Every user of Marketo should consider themselves a scientist." —Jessica Kao

Marketing operations: The scientist on the marketing team

The marketing operations function has always been a critical part of engagement marketing and marketing technology, but as it relates to experimentation, marketing operations is the scientist on-staff. But that doesn't preclude field marketers, demand generation pros, and customer marketers from adopting an experimentation and testing mindset.

Any marketing function tasked with troubleshooting answers to questions like "why didn't this work?" or "how can this be improved?" can benefit from the scientific process, which encourages them to work together to figure things out. Thank your plumber.

"Marketing operations is a lot like a plumber. Nobody calls us to thank us when the water flows to where it needs to go. When something breaks, call the plumber," says Kao.

Must love logic puzzles

In many ways, marketing operations is like a constant series of logic puzzles.

When asked how to hire a marketing operations professional, Jessica advises companies to look for those individuals who really like post-it notes. It may sound funny, but, as she points out, people who are process-oriented and like logic puzzles often share the traits of a scientist.

The ideal marketing scientist exhibits four key traits:

Curiosity: great marketing operations professionals are curious as to how things work, with a proclivity for taking things apart and putting them back together again. Science is really about questions and answers, and these pros often ask "How? Why? What if?" in a constant quest to find the answers.

Humility: being humble matters in this field. "If you think you know everything, marketing technology will kick you in the butt so hard," says Kao. "There are things I learn every day doing this job."

Collaboration: the most successful marketing operations professionals work together as a team and across various departments to communicate the results of experiments and ensure the results are beneficial across the organization.

Academic rigor: not all experiments are academic, but there must be some conviction in the process used to question, hypothesize, design an experiment, test, gather data, and observe results.

Vince Warnock, also looks for these traits when hiring team members. To him, "adaptability is key with an experimental mindset. We seek those who can not only adjust to new things, but who are also seeking to continuously improve themselves."

7 ROADBLOCKS TO OVERCOME

What holds us back from a culture of continual innovation, experimentation, and optimization?

1. IT and creative make the changes

Though the rise of marketing technology is making great strides, many marketers aren't as technical as their counterparts in IT. So, many rely on IT or creative teams in order to create changes to email templates, landing page elements, or other factors that would be changed in an experiment.

Because the process isn't always very easy, many marketers rely on the smaller, or easier-to-test elements (specific offer, subject line) or worse, avoid experimentation all together.

Warnock recommends building strong relationships with key teams, such as IT.

"Bring solution architects and IT into the experimentation process as well. They are part of your success. An experimental approach is not just ours, in marketing, but that of our company. Bring it to the table for all teams."

2. Innovation runs counter to traditional organizational values

Organizations are about consistency and efficiency. Leaders typically look to avoid chaos. At the same time, innovation is about new ideas, new ways of doing things, new things to do, and possibly, new people to do them. This all creates chaos and that leads to resistance from the existing culture.

"In most organizations, leaders and employees alike receive the implicit message that asking questions is an unwanted challenge to authority. They are trained to focus on their work without looking closely at the process or their overall goals. But, maintaining a sense of wonder is crucial to creativity and innovation." —Francesca Gino, Harvard Business Review[6]

Ultimately, teams that embrace an experimentation mindset have a culture built on trust that their team members can, and will, improve things.

3. Decision paralysis

Often, tests occur simply for the sake of testing. Because we can collect so much data related to our campaigns today, too many variables are measured, and without a clear reason for the experiment in the first place.

This can cause decision paralysis—as tests fail to indicate a clear path ahead, or a clear "winner" as you'd find in a proper A/B test.

Often, tests are conducted and colleagues ask, "did it work?" Without knowing what exactly was tested, against what hypothesis, or what to look for in the results, it's impossible to answer that question.

4. Biting off more than you can chew

Many marketers are overwhelmed as well by the sheer number of elements they could test. There is such a thing as too much data collected. To mitigate this, it's critical to figure out a starting point.

Consider designing a minimum viable experiment (MVE).

In product development, minimum viable products are brought to market once they have just enough features to satisfy early customers and to provide feedback for future product development. In the same way, an MVE is used as a proof of concept.

6 Harvard Business Review, "The Business Case for Curiosity" Francesca Gino, September 2018

Vince Warnock describes one example of an MVE regarding paid search:

"Our hypothesis was that weather was affecting some of our conversion rates through paid search. We ran dynamic ads where we'd change the copy based on the weather. We disproved that hypothesis and found no negative, or positive, reaction to it. The results were the same as standard conversion rates—no better, no worse even if we acknowledged it was a beautiful day in Auckland or Wellington."

5. Lack of bandwidth

On the flip side of running too many tests, many teams do none at all. This is understandable, as marketing teams are tasked with doing more than ever. But, in the spirit of continual improvement, some testing is better than no testing, especially considering how accessible test results are with modern marketing tools.

"The ability to collect data means an obligation to put the data to work." —Alex Rynne

6. Failing to teach experimentation as a skill

Experimentation is a skill, and that means it must be taught.

Testing and optimizing is a process—and like all other skills, there are right and wrong ways to go about designing, deploying, and learning from experiments. Teams must be taught the scientific process, and leaders should encourage a mindset that embraces learning from failure.

"This is a change from how a lot of people operate today. Many may feel nervous about experimenting. As digital marketers, we're trained to avoid failure with every campaign, but failure is a teacher. Every metric, and piece of data, can prove something you can use towards optimizing the next campaign. Though our teams don't want to admit failure, we have to help them see the insight hidden within that sense of defeat. We must help them use failure to inform, and improve, the next campaign." —Vince Warnock

7. Lack of documentation

It's important to create a central repository of lessons and best practice templates. For example, you may run experiments with a field marketer who then later leaves the organization. Without a central system of storing what experiments were run, and what learnings were derived, that knowledge leaves with them.

The team at Heinz Marketing stores theirs on a common intranet/shared drive tool. The repository covers how best to promote webinars, throw field events, manage Marketo, onboard a client, even how to run weekly updates and status meetings.

HOW TO BRING STAKEHOLDERS ALONG IN THE TESTING PROCESS

Experimentation loses its impact when it exists only in a bubble.

Depending on the experience of your boss, your boss' boss, and so on, it may be more difficult to convey the importance of running tests and experimentation. Here are some tips:

Tie experiments to business goals

The way to truly express the importance of these initiatives is to tie your motivations back to explicit business goals, or risk. For example, demonstrate how much email marketing channels drove last year (perhaps by pipeline or revenue). Estimate the impact of improving results by 2%, or demonstrate the risk of decreasing conversions.

Tie experiments back to revenue and impact metrics that executives care about. Give stakeholders an easy way to understand if your tests made (or will make) a significant difference.

Align with sales

Yes, even in experimentation! Their front-line experience of talking face to face with customers can deliver a wealth of insights to help inform future questions, hypotheses, and experiments.

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HOW TO EVANGELIZE YOUR EXPERIMENTATION—AND RESULTS

To maintain buy-in for experimenting internally, it's important to establish visibility for your efforts and set the proper expectations.

Visibility

How do you keep track of marketing experiments within the team?

Vince Warnock manages all current experiments on a Trello board. The board is organized into three categories:

1. In-market
2. Prepared
3. Planned

"We want our experiments to be as visible as possible in order to make it clear we're running constant tests."

Tell a story

It's important to tailor the information shared up the chain appropriately. Don't send open rates to your CEO. Help them make sense of it by drawing out the "so what" within the experiment. Make clear what question it is that you're answering, e.g., "will this improve conversion, yes or no?"

Warnock recommends setting up a dashboard.

"We tell a story through that dashboard so that anyone in the C-suite can see what experiments we're running, what we're trying to prove or disprove, and a clear annotation of what we're learning."

Expectations

Visibility matters, as does setting expectations appropriately. It's important to set the expectation internally that experiments are about looking for opportunities for growth, as well as areas for improvements.

Warnock sets aside 10-20% of their budget for channel-specific experimentation.

"Part of selling this story to the C-suite is by focusing on the fact that you're trying to make things more efficient."

Experimentation

basics and how-to's

A PRIMER ON THE SCIENTIFIC METHOD

We understand—it's been a while since science class. Here's a quick primer on the scientific process, A/B testing, and more to inspire your inner scientist.

The scientific method has eight steps:

1. Define a question
2. Gather information and resources (observe)
3. Form a hypothesis
4. Test the hypothesis by performing an experiment
5. Analyze the data
6. Interpret the data and draw conclusions
7. Publish results
8. Re-test

Key terms to know:

Control: sample that remains the same throughout the experiment.

Example: Say you were testing how plants grow in different types of soil mixtures. The control pot uses regular potting soil and the same daily routine of water and sun. The other pots have different variables—different soil, varying degrees of light, and various temperatures.

The control is your default set of data. It contains all parts of the experiment except the one factor being tested.

Confounded variable: confounding occurs when the controls do not allow the experimenter to reasonably eliminate plausible alternative explanations.

"This is essentially biasing your data. An example would be to bring a group of people who all like vanilla ice cream into a room and ask them 'if you like vanilla ice cream raise your hand.' It's not that the experiment isn't valid, it's that the conclusion isn't valid. There is an inherent bias." —Jessica Kao

What makes a good experiment?

Three key components:

1. A specific, testable hypothesis
2. A large, statistically valid sample size (p-value)
3. A control and a variable

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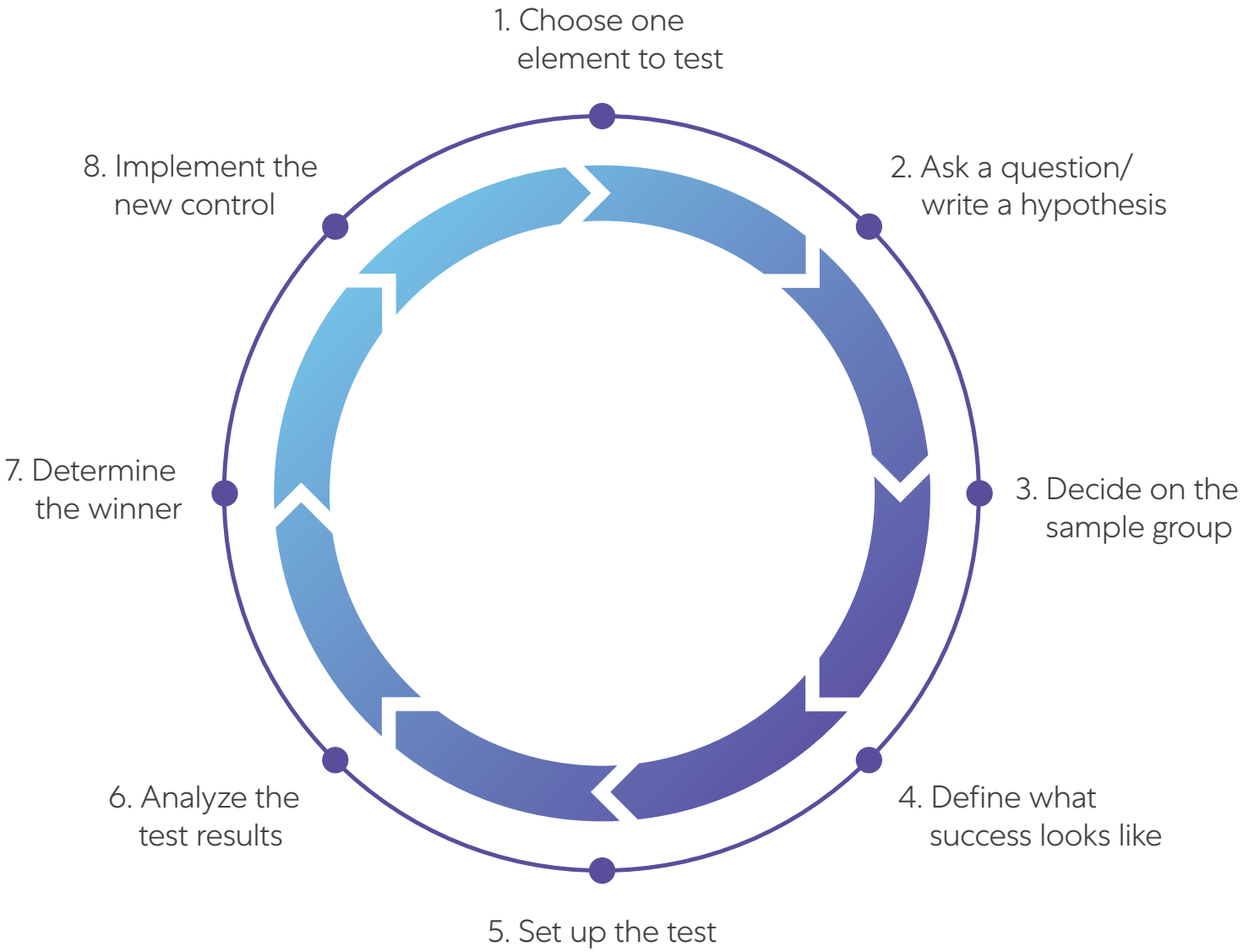
MARKETO'S A/B TESTING METHODOLOGY



DESIGNING THE EXPERIMENT

How do you decide what to experiment with?

There are two mindsets:
Fixed and Flexible.

Fixed: In this mindset, you'll have a set testing roadmap, a plan to measure the performance of various elements such as what side of the landing page your form resides on, and when.

Flexible: You may have the ability to run multiple tests without a clear end point. You may test something whose result leads you to a new and different test. Here, there's flexibility and a shared understanding between all stakeholders that what you're testing may change, depending on the opportunities presented and potential impact.

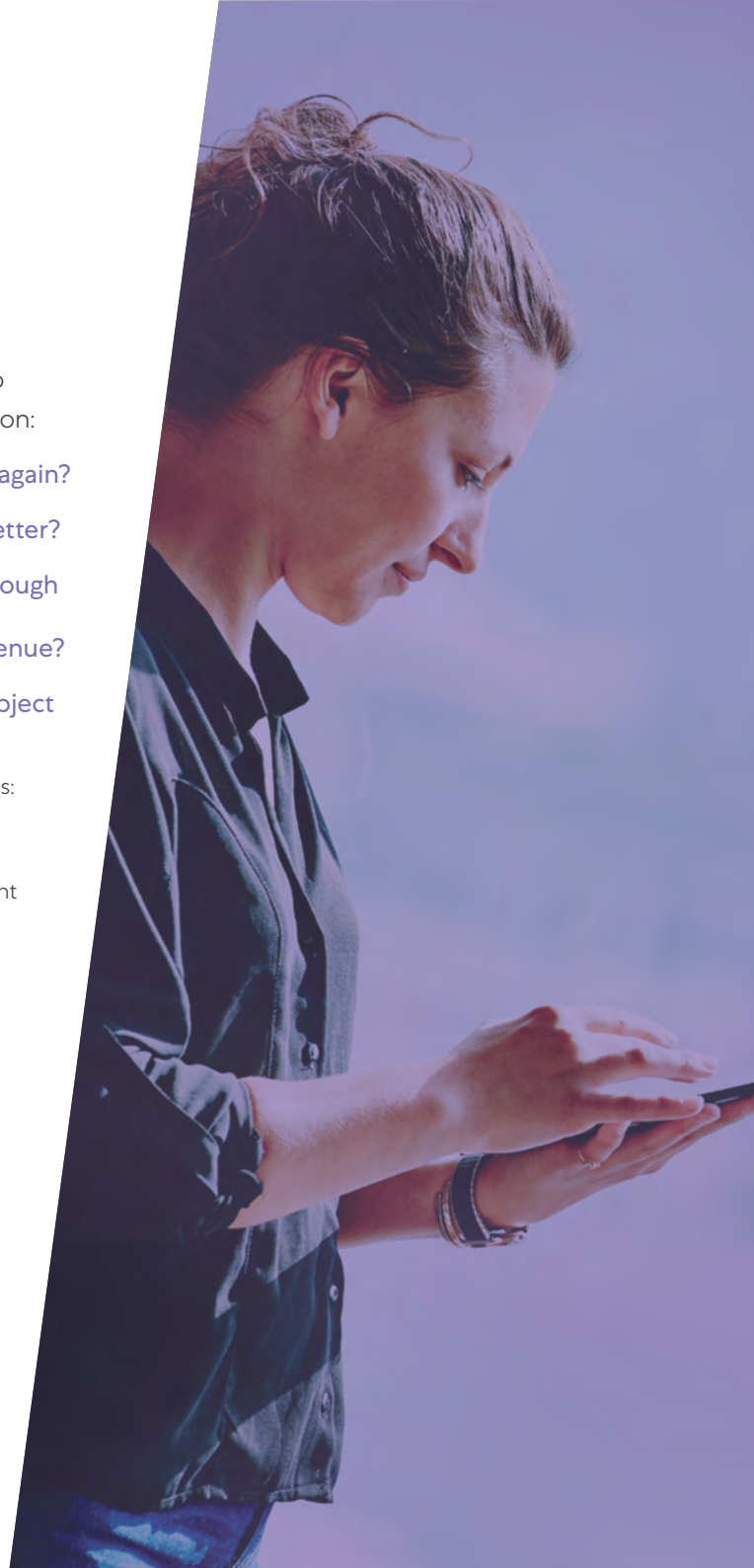
"We have spitball sessions to come up with new testing ideas. Coined by Jason Miller, Head of Brand Marketing, Microsoft Advertising EMEA, spitball sessions are essentially a no judgment zone for brainstorming, where any idea is welcome. When you're on the same team with shared goals, it only makes sense to have internal buy-in on your A/B testing. These meetings also serve as a good way to ensure we're walking the walk (not just talking the talk) when it comes to testing a good mix of brand awareness, lead generation, and thought leadership content."
—Alex Rynne

Examples of great questions to answer through experimentation:

1. Should we do this webinar again?
2. Which ebook title works better?
3. Did we spend X and get enough out of it and how did we influence pipeline and revenue?
4. Does having CMO in the subject line drive more opens?

   Subject line A: "Learn from CMOs: Engagement Strategies for Your Marketing"

   Subject line B: "Learn Engagement Strategies for Your Marketing"



"At the end of the day as a marketer, we need to decide between what we are going to do more of, and less of. We need to do more of the things that make money, less of the things that don't. Testing should lead you to this answer." —Jessica Kao

She advises restructuring common marketing questions into testable hypotheses.[7]

Before a hypothesis can be created, begin with a deep understanding of current performance. You need to gather as much information as you can to understand where opportunities are for improvement. How are all channels performing? How is your website performing? Your sales funnel?

Marketing Question	Testable Hypothesis	Relevant Metric	Finding (sample)
What's the best practice in email subject lines?	Putting brackets around the CTA in the subject line increases email opens [Register Now] Everything you need to know about GDPR vs. Register Now: Everything you need to know about GDPR	- Email-opens	Putting brackets around the CTA in the subject line increases open rates by 18%.
How many webinar invite emails should I send?	There will be more registrants if I send 3 vs. 2 email invites.	- Number of registrants - Number of unsubscribes	Sending 3 email invites will result in a high number of unsubscribes and outweigh the benefits of the additional registrants compared to sending 2 invites.
How many offers should I have in one email?	Will increasing the number of CTA buttons from 1 to 2 or 3 negatively impact conversion?	- Number of conversions	Having 3 or more different CTA buttons with different offers negatively impacts conversion as compared to 2, or 1.

7 Marketo Summit 2018, Jessica Kao

HYPOTHESIZING

"Tests are all about the question you're asking, and framing it in a testable hypothesis. Once you develop a testable hypothesis, then you can craft the box in which you'll write them."
—Jessica Kao

Because modern marketing tools are capable of measuring so many elements of our campaigns, it can be easy to over-complicate our experiments.

Start with a specific hypothesis
Every experiment needs a measurable, testable hypothesis. Your results either confirm the hypothesis, or null the hypothesis (prove the opposite). Some are inconclusive.

As Kao advises, don't test for the sake of testing:

"Your outcome metric (what you're measuring) can be a number of things: revenue, profit, leads, conversion rates, and more. But when you are designing a test, ask yourself, 'What am I going to do with this information? What am I going to change?' Whatever you decide to test, ensure that the question you are asking is going to be actionable."

Example of a specific hypothesis:
Personalizing the title of an ebook by function will lead to better LinkedIn ad engagement.

VARIABLES

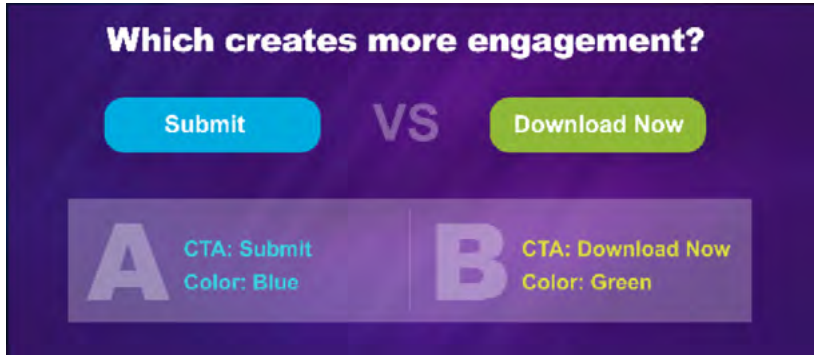
"It's called an A/B test, not an A/B/C/D/E test."
—Jessica Kao

Keep tests focused

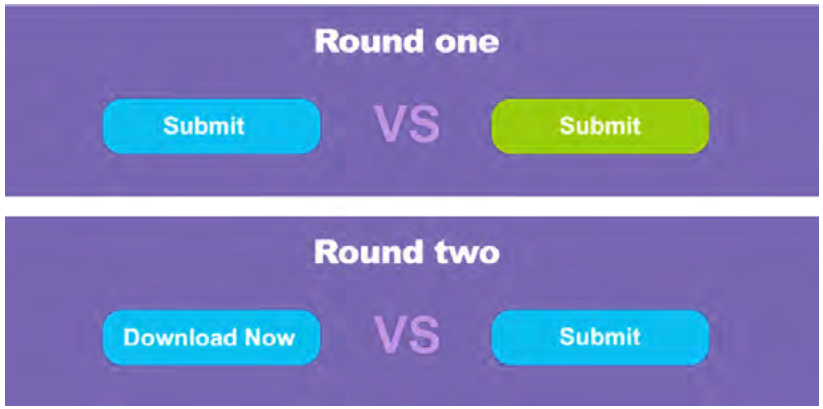
Focus on one element and one variable at a time to discern how it impacts your engagement rates. For example, when testing emails, focus on one outcome like open rate, click rate, unsubscribe rate, and one variable such as a subject line.

"In order to really answer a question, you need to put a biodome over it. If you're going to experiment with mice, you have to put them in a box. If you let them run around the maze, you must have a very defined and controlled experiment. This is a skill set that marketers need to acquire if they really want to embrace this experimentation culture," says Kao.

EXAMPLE OF A BAD TEST



EXAMPLE OF A GOOD TEST (IN A SERIES)



Source: Marketo Summit 2018, Jessica Kao

SAMPLE SIZE AND STATISTICAL SIGNIFICANCE

How much is enough?

Many marketers run tests but do not know when the results are statistically significant.

Your goal is to prove, significantly, what works, and what doesn't. Take your time, and confirm you're producing the right results.

"Sample size is important because it affects whether the conclusions are likely to be valid or not. You need a greater sample size to see differences."
—Jessica Kao

Tip: Reminder, stay focused. Focus on testing one thing—if you use 10,000 people and test seven variants, your target population has dropped from 5,000 to 2,000.

Statistical significance

Can your test be trusted? To figure that out, use a statistical significance calculator to determine if the deviation from test A to test B was statistically significant or if you need a bigger sample size.

Your goal is confidence. Every comparison between A and B results in a confidence score—a percentage that indicates the probability that the result can be trusted.

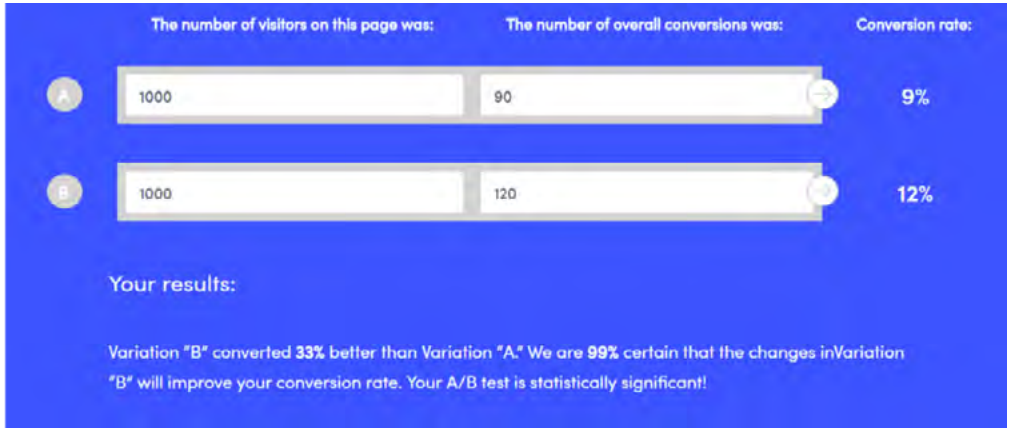
If you're making business decisions as a result of your tests, you want to be sure your test is valid. A statistically significant result means it most likely wasn't due to chance.

Using a calculator

To understand whether a change (e.g., subject line or header image) impacted the result in a meaningful way, you'll need to run the results through a calculator to determine statistical significance. There are many free versions online.

Minimum significance

Your threshold for risk is your "minimum significance." At Marketo, we like to use 95%. That means we're 95% sure that one element performs better than another. This means, if our significance level is 95%, we're 95% confident the results are legitimate,



Source: Kissmetrics

and not random. But, it means there's a 5% chance we are incorrect.

P-value

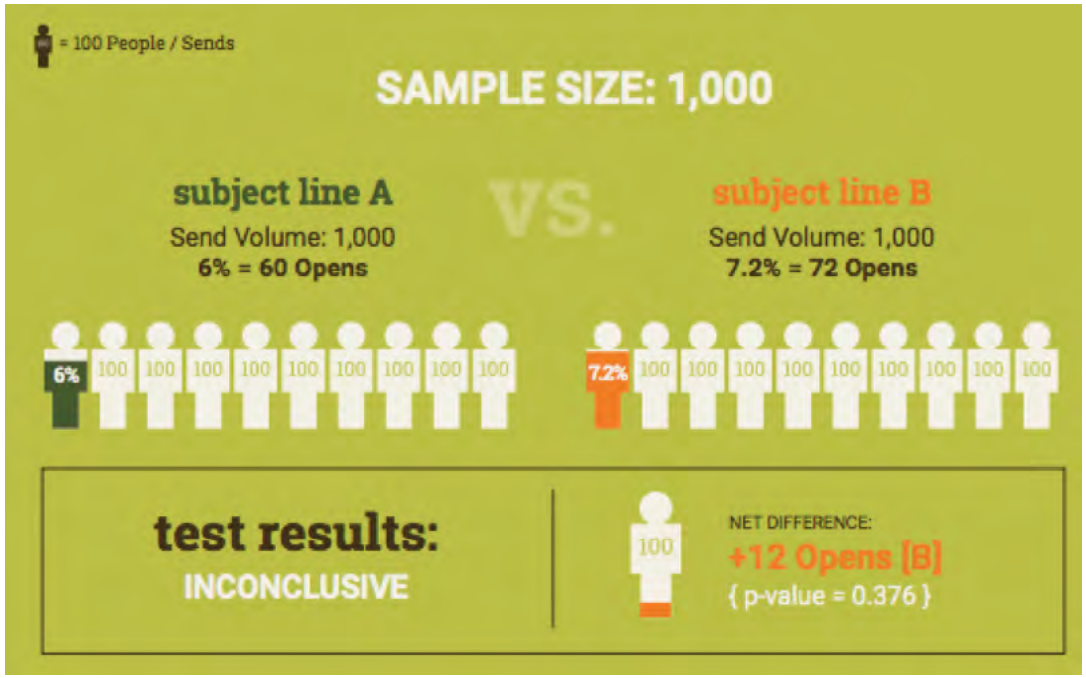
P-value refers to the probability value of observing an effect from a sample. A p-value of < 0.05 is the conventional threshold for declaring statistical significance.

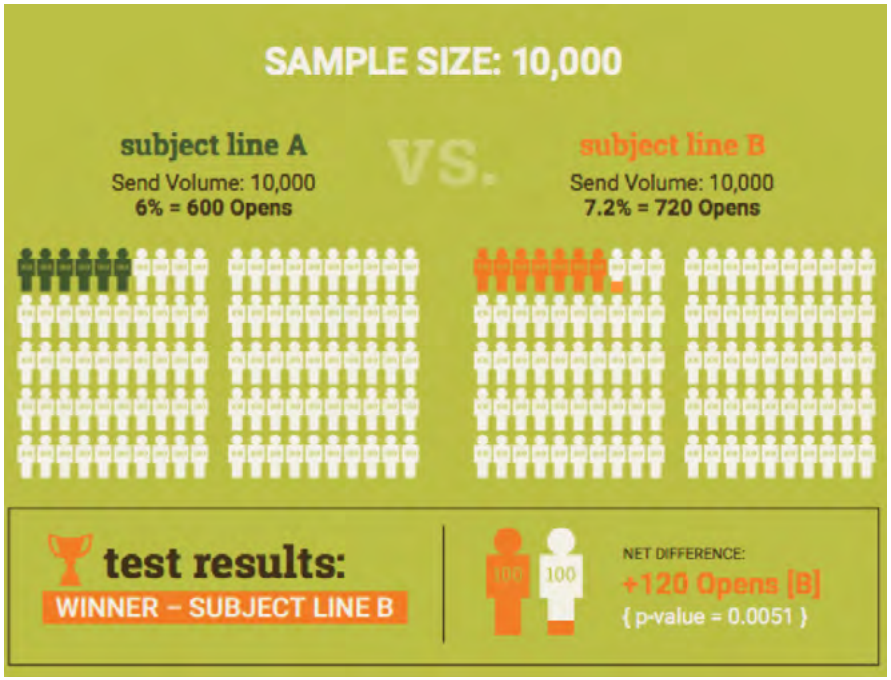
In other words: "Every experiment needs to choose the right people to represent the world. The conclusion drawn from this subset will represent the world. The probability of it being correct is related to the p-value."

"The combination of your target size and the difference between your two test groups determines what conclusions you can draw. Go into your testing with the understanding that a larger sample size is always going to give you results that you can be more confident in." —Jessica Kao

Think of it this way: Returning to our previous ice cream example, if you ask a room of five people if they prefer chocolate or vanilla ice cream, and all five say they prefer vanilla, can you draw the conclusion that everyone in the world likes vanilla ice cream?

Of course not. Your sample size must provide you with a high likelihood that you'll get the same value if you were to ask everyone in the world.





Source: Digital Pi ebook "How to make the most out of your Marketo A/B test

GIVE PROPER TIME TO YOUR EXPERIMENT

Mike Madden offers this rule of thumb: "Seek at least 1,000 observations per control."

For a landing page A/B test, ideally, you'll see thousands of page views before you can truly understand if the conversion is better on A or B. This could mean running it for 30-60 days.

For email subject lines, depending on what element you're testing, you'll need thousands of emails delivered to understand what truly impacts your engagement rates (positive or negatively).

"For email tests, three or four campaigns should be sent, split between control and test. Then, aggregate the data using a statistical significance calculator to understand if you found what you needed to (based on your hypothesis)." —Mike Madden

Real experiments and their results

EXPERIMENT A

PERSONALIZATION: FRIEND OR FOE IN THE BUYER'S JOURNEY?

According to Experian, personalized emails deliver 6x the transaction rates, while Ad Age reports that 33% of marketers have personalization as their top priority for the future. With these impressive numbers, it would make sense to personalize as much as possible, but you can't be sure without testing.

To learn more, we ran a test where the control group sent personalized emails with the name and contact information of the lead owner, while the test group sent with the generic defaults of Team Marketo.

By testing one element at a time to see how it affects the larger performance of a program, you can assess the effectiveness of each variable in driving conversions and make necessary adjustments.

The results showed us that introducing personalization early in the buyer's journey may be detrimental; if a new name comes into the database, it isn't the best idea to immediately send them emails from a dedicated sales rep. When someone is new to a brand, being generic helps soften the introduction and facilitates progression to later stages.

We also learned that mid-stage prospects aren't ready to hear from a salesperson either. Nobody likes being sold to and doing it too soon with these buyers can turn them off. Late stage emails could not produce results with statistical significance, so we used our best judgment and stuck with personalized from name emails. Our reasoning was if a prospect has moved that far along, there's a good chance they will be interested in speaking to a sales person directly. Overall, this was a useful test for finding the right hand off point for personalization.

EARLY STAGE	MID STAGE	LATE STAGE
Winner: Generic From Name	**Winner:** Generic From Name	**Winner:** Generic From Name
Results:	**Results:**	**Results:**
· 10% higher open rate	· 3% lower open rate	· 4% higher open rate
· 26% higher click-to-open rate	· 30% higher click-to-open rate	· 5% higher click-to-open rate
· 38% higher click-through rate	· 26% higher click-through rate	· 9% higher click-through rate
100% statistical significance	**100% statistical significance**	**66% statistical significance**

Source: Marketo's Secrets to Campaign Optimization

EXPERIMENT B

LESS IS MORE IN EMAIL FORMATTING

Even the simplest looking emails are complex, with headers, social links, and CTA buttons to consider. While many of these features help accommodate key elements for visual branding, they can also distract a subscriber from reaching the call to action. As marketers, we like sending aesthetically pleasing emails, but it's worth considering whether links to company logos or social pages are actually hurting social performance.

In our test, we looked solely at unique offer clicks, and the results strongly favor text-based emails, with 21% higher click-to-open rates and 17% higher click-through rates. This difference showed us that focusing a prospect on a single link helps them better reach the desired call to action.

This may be a tough pill to swallow, but the best marketers understand that we need to challenge our beliefs and push for the best process in every campaign we run. If you let your opinion get in the way, you can miss out on some easy wins. As consolation, text-based emails require less resources and time to create. Make sure to test across asset types, as HTML may be better for more visual programs, such as webinars.

EXPERIMENT C

WHAT TIME OF DAY IS BEST TO SEND MARKETING EMAILS?

In this experiment, Marketo determined that 1:00 pm is our golden rule for sending prospecting emails. Here's how:

First, we split our total audience (all marketable names, with an engagement date in the past year, with marketing job titles) into three groups: 5 am (control group), 10 am, and 1 pm. We backed into the numbers so that we saw at least 1,000 opens per test for statistical significance. Then, we sent each group an email from a different campaign to ensure exact timing on the send. This test was conducted across seven different email campaigns, with over 200,000 emails sent, across buyers in early, middle, and late buying stages.

The 1 pm group saw 14% higher open rates, 5% higher click-to-open rates, and 20% higher click-through rates.

Email	Sent	Delivered	% Delivered	Opens	% Opened	Clicks	CTR	CTO	Unsub.	Unsub. %
5am Control	70,128	68,791	98.1%	5,983	8.7%	306	0.4%	5.1%	98	0.14%
10am	68,034	66,763	98.1%	6,227	9.3%	342	0.5%	5.5%	112	0.17%
1pm	68,067	66,754	98.1%	6,642	9.9%	356	0.4%	5.4%	102	0.15%

1PM IS THE WINNER

EXPERIMENT D

DO TRIGGER-BASED EMAILS PERFORM BETTER?

We had a hypothesis that sending an email based on what page a web visitor browsed would perform better. Our instincts tell us that relevance is a better experience for a buyer, and this test helped us prove that we can use triggers to drive revenue.

What we learned: trigger-based emails drive 3x more engagement than batch/nurture emails.

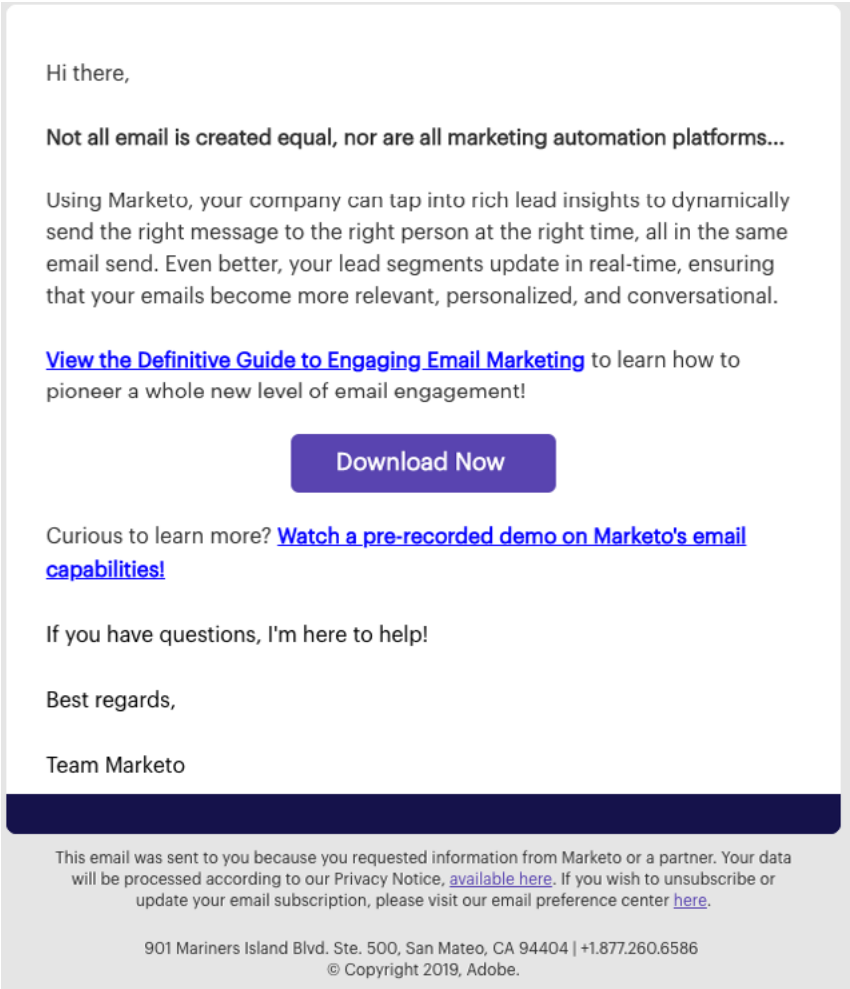
Our experiment began with the understanding that everything on a website is a doorway that a person walks through. For Marketo, our most important pages to identify an interested prospect are related to our products and solutions, our customer stories, and our case studies. If a known subscriber visits a high-value page, we can trigger campaigns to initiate an email send if they fit the right filter (For example, if they are marketable, within our target status, not sent an email in the past 30 minutes, and meet our vertical-specific criteria).

By monitoring what people are doing on our website, we can complement the content on that page with an email containing information relevant to what they viewed—with something of additional value. For a known subscriber who visits email marketing content, for example, we sent an email like the one you see to the right.

The results were clear. Comparing the results of trigger-based emails to the results from standard batch and nurture emails, we saw:

- 261% higher open rates
- 157% higher click-to-open rates
- 833% higher click-through rates

Additionally, these emails were 7,675% more efficient at generating an opportunity.



Hi there,

Not all email is created equal, nor are all marketing automation platforms...

Using Marketo, your company can tap into rich lead insights to dynamically send the right message to the right person at the right time, all in the same email send. Even better, your lead segments update in real-time, ensuring that your emails become more relevant, personalized, and conversational.

View the Definitive Guide to Engaging Email Marketing to learn how to pioneer a whole new level of email engagement!

Download Now

Curious to learn more? Watch a pre-recorded demo on Marketo's email capabilities!

If you have questions, I'm here to help!

Best regards,

Team Marketo

This email was sent to you because you requested information from Marketo or a partner. Your data will be processed according to our Privacy Notice, available here. If you wish to unsubscribe or update your email subscription, please visit our email preference center here.

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EXPERIMENT E

DISPROVING THE MYTHS ABOUT CONTENT AND BUYING STAGES

Mike Madden and the team began with an important question: Are we serving the audience we intend to? And, is our content as effective as we'd like it to be for that audience?

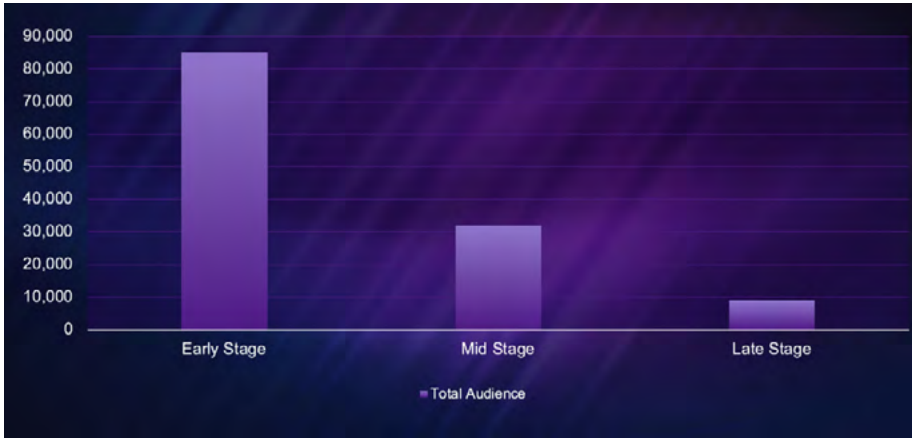
There was a common belief at Marketo (as well as in the industry) that early-stage content must follow certain topics. E.g., "3 Hacks to Boost Email Open Rates" would be considered appropriate early-stage content as it didn't talk about our technology category (marketing automation) or Marketo itself.

Thus, our hypothesis was that what the content talked about would best determine whether it was targeted to early, middle, or late-stage buyers (scored by their behavior score).

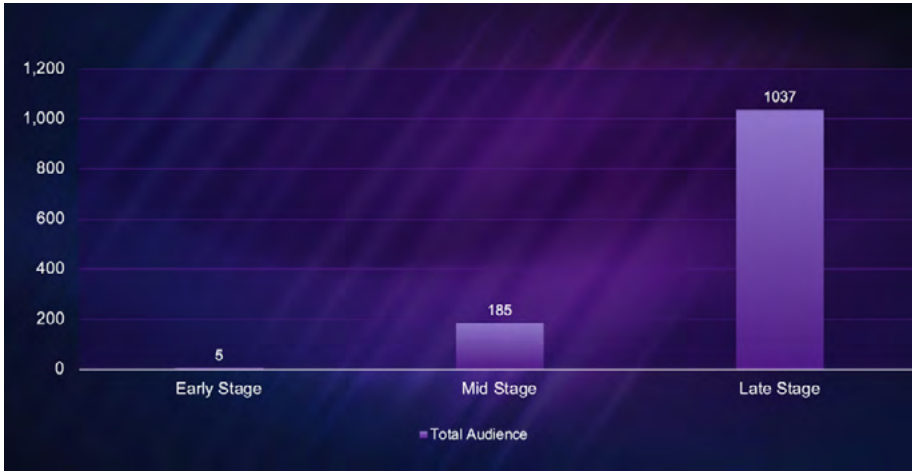
Our test was simple—we simply analyzed the registrants of the first webinar invite for the aforementioned email open rate webinar. The list was distributed as below, with a larger number of early-stage prospects.

We assumed the majority of attendees would be early-stage prospects, given the topic. We were wrong.

Who we invited: buyers plotted out by behavior score



Registrations after the first email invitation by buying stage



Source: Marketo Summit 2018, Mike Madden

We saw a complete inverse of the distribution between early, middle, and late-stage buyers.

To validate these findings, we ran an analysis of the registration list for another "early stage" webinar we conducted a few months prior called "8 Biggest Mistakes Social Media Marketers Make and How to Avoid Them."

Again, we analyzed where the list fell into these buying stages and found the same result—many more late stage buyers.

We looked at the first email invitation for our initial email marketing webinar, and pulled the performance of emails to buyers in the middle-to-late stage of the buying journey. We found:

- 47% lower unsubscribe rates
- 131% higher open rates
- 984% higher click-to-open rates
- 1,320% higher click-through rates
- 8,965% higher landing page conversion rates!

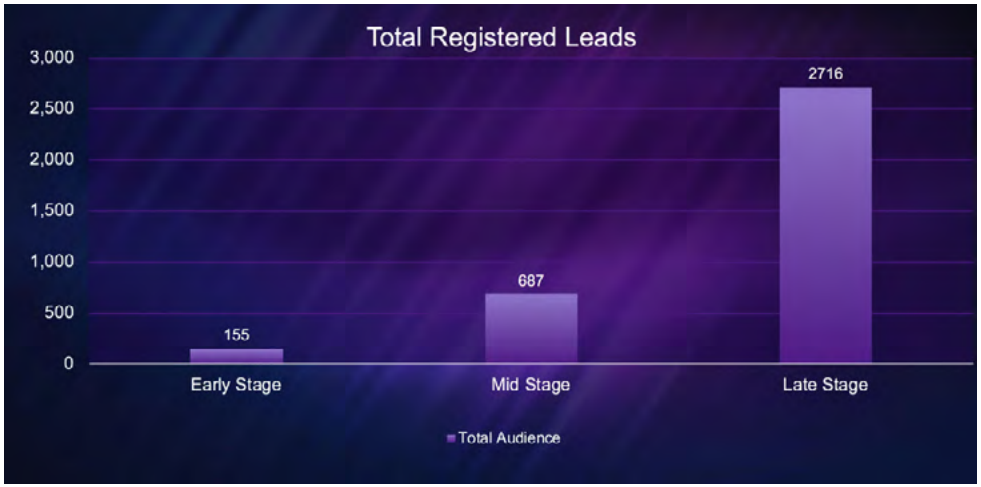
Thus, our analysis proved that inviting middle-to-late stage buyers to this webinar led to much higher conversions.

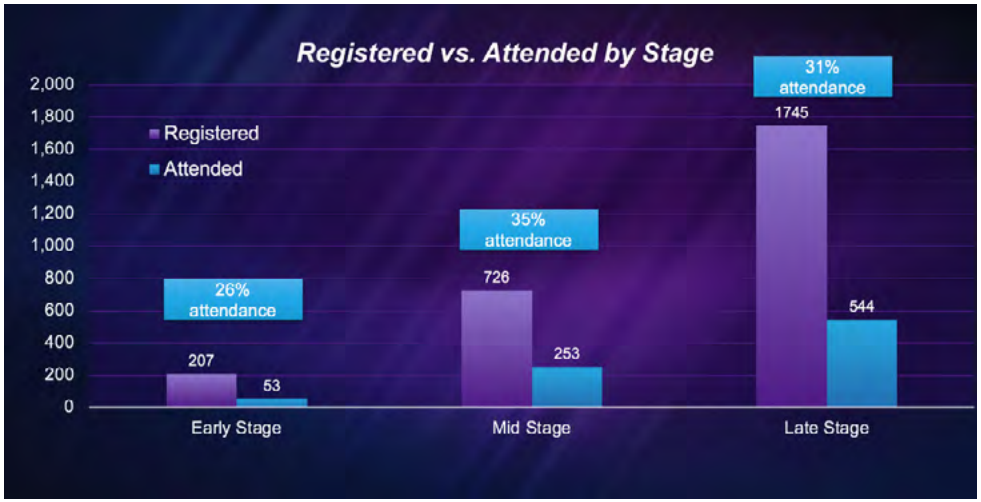
Another analysis, this time using attendance rate, found that middle-to-late stage buyers also showed up to the webinar more than early-stage buyers.

Our takeaway: Content is about investment. For our buyers, the topic was less important than the format—despite the prevailing wisdom and accepted truths within both our team and industry. What mattered was how long it is, and the commitment involved in reading or watching it. An early-stage buyer may not have the right connection with your brand yet to commit to an hour-long webinar.

Most importantly, the takeaway here is that we were able to improve our webinar registration conversion rates and better serve our audience by analyzing our existing data in a new way, and seeking to test a hypothesis that had become a "norm."

Registrations of another "early stage" webinar by buying stage





Source: Marketo Summit 2018, Mike Madden

Where and how to use experiments

OPTIMIZING LANDING PAGES

Why run tests on your landing pages? Think of it this way, as articulated by Mike Madden:

> Picture this: You're at a car dealership. A salesman approaches you and says "Hi there. Can I please get your first name, last name, email address, home phone number, and home address?"

Taken back, you eyeball the guy up and down, looking at his clothes, shoes, posture, hairstyle, and facial expression, all while trying to figure out why this person asked you for this information when he doesn't even know who you are or what car you're interested in yet.

This awkward encounter is similar to what people might experience when they arrive at your landing page. Within only a few seconds, they'll decide whether or not you've created an effective landing page that is interesting, relevant, and enticing enough to divulge their precious personal information.

Which landing pages to test

WiderFunnel suggests using a "PIE" method to prioritize which landing pages to experiment with and optimize.

- **Potential**—How much improvement can be made on the page? Take into account web analytics data to determine room to grow.
- **Importance**—How valuable is traffic to the page? Seek the highest volume and costliest traffic.
- **Ease**—How complicated will the test be to implement on the page? This includes both technical and "political" ease. (E.g., your homepage may have many stakeholders.)

	Web analytics Heuristic analysis Voice of customer	Cost Traffic volume Return on investment	Technical "Political"	
LIFT zone	Potential	Importance	Ease	PIE score
Homepage	10	10	8	**9.3**
Checkout	8	10	9	**9.0**
Product page	10	9	7	**8.7**

Source: WiderFunnel – widerfunnel.com/how-to-prioritize-conversion-rate-optimization-tests-using-pie

Tips for running landing page A/B tests:

- When experimenting with landing pages, seek to find the elements that drive the best conversions.
- Your mindset should be to templatize an element so you can incorporate it into every future iteration.
- Many things can be changed on a landing page:
  - Copy (title, description)
  - Whitespace
  - Button color
  - Form length
  - Form placement
  - Graphics / video
  - Length

Don't change too many variables or you can't accurately pinpoint what led to a change in behavior and conversions.

Test multiple times. A landing page should ideally see thousands of page views before you can really understand if the conversion is better on version A or version B, and make meaningful comparisons. That may mean 30-60 days in-market before analyzing the results.

Multivariate vs. A/B testing

Consider two powerful optimization methods that complement one another.

A/B testing

A/B testing compares two versions of a page. Site visitors are bucketed into one version or the other. By tracking the way visitors interact with the page they are shown—the videos they watch, the buttons they click, or whether or not they sign up for a newsletter—you can determine which version of the page is most effective.

Simple in concept and design, A/B testing is a powerful and widely used testing method.

Keeping the number of tracked variables small means these tests can deliver reliable data very quickly, as they do not require a large amount of traffic to run. A/B testing is so speedy and easy to interpret that some large sites use it as their primary testing method, running cycles of tests one after another rather than more complex multivariate tests.

A/B testing is best used to measure the impact of two to four variables on interactions with the page.

Multivariate testing

Multivariate testing uses the same core mechanism as A/B testing, but compares a higher number of variables, and reveals more information about how these variables interact with one another.

This is also known as full factorial testing, and is one of the reasons why multivariate testing is often recommended only for sites that have a substantial amount of daily traffic—the more variations that need to be tested, the longer it takes to obtain meaningful data from the test.

After the test has been run, the variables on each page variation are compared to each other, and to their performance in the context of other versions of the test. What emerges is a clear picture of which page is best performing best, and which elements are responsible for this performance. For example, varying a page footer may be shown to have very little effect on the performance of the page, while varying the length of the sign-up form has a huge impact.

Multivariate testing is a powerful way to help target redesign efforts to the elements of your page where they will have the most impact. This is especially useful when designing landing page campaigns, for example, as the data about the impact of a certain element's design can be applied to future campaigns, even if the context of the element has changed. But, the single biggest limitation of multivariate testing is the amount of traffic needed to complete the test.

TROUBLESHOOTING

Troubleshooting is an ideal environment within to use an experimentation mindset. After all, it's one giant logic puzzle. Questions often arise like: Why aren't leads flowing into Marketo the way they should? Is it Marketo? The website? Our CRM? All three? As you ask the question, "why isn't this working?," your answers are best derived from scientific reasoning.

"Many marketing technology users can feel helpless when issues arise within their marketing tech stack," as Jessica Kao explains.

"Because tools like Marketo are connected to everything, who do you go to for help? Your CRM? Your marketing automation tool?"

Rather than submit a ticket or simply asking your web person for help, Kao recommends putting on your scientist hat and figuring things out.

"Be the scientist. Plan the experiment. Have a hypothesis. Go to your subject matter expert (your web developer or sales operations colleague) with a hypothesis you'd like to test. Work with them to eliminate the possibility or the causes of the issue. Be leaders, don't just say 'it's broken.'"

Think of the process like following breadcrumbs, à la Hansel and Gretel. In the case of leads not flowing from the website as they should, figure out the last place leads were entering successfully. Where do the breadcrumbs disappear? Methodically test each and every variable one at a time to eliminate that each variable is the cause. Is it the website? Is the form submitting? Is all the correct data there? What if the user is based in Germany, Sweden, or the U.S.? Test each variable and layer.

Troubleshooting requires a little creativity.

Where and how to use experiments

ACCOUNT-BASED MARKETING

Targeting key accounts is critical for B2B organizations selling high-value deals—but there are many ways to engage them. In an ABM environment, marketers can experiment with the various channels and tactics available to penetrate and expand within specific accounts.

Matt Heinz describes a tasty experiment he ran with field events:

"We believe getting prospects out of the office is valuable. We've tried great speakers at a lunch and learn, or inviting them to a nice dinner positioned as a peer-to-peer exchange. We found that breakfast events worked better in smaller cities. With this knowledge, we ran an experiment with the hypothesis that people want a good breakfast. Sure enough, a full breakfast of eggs and bacon performed better (in terms of attendance) than a continental breakfast!"

(Who said experimentation can't be delicious?)

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PILOT PROGRAMS

Joe Reitz, Senior Global Technical Training Manager at Amazon Web Services recommends pilot programs that follow the process of experimentation.

"Pilots help to identify, in a short amount of time, the potential impact of creative solutions."

For example, his team wanted to test a nurture program. They built a pilot program in three phases: awareness, consideration, and conversion. They built attribution reporting for the first 90 days of the program. After the pilot, it was revealed that marketing influenced $60M of pipeline and $10M of revenue in this three-phased nurture program, just by the virtue of measuring prospects working their way through the process, and measuring their interaction with emails, landing pages, and ads.

In just 90 days the team was armed with data to inform whether or not to continue investing in the program, and could more accurately determine what resources would be necessary if they wanted to 10x those results.

"Piloting creates a more informed decision for how to build a better strategy overall."

EMBRACING EXPERIMENTATION

"If all you do is read trade publications and reports on best practices, you're literally going to be doing what everyone else is doing. Guess what—your competitors are doing it too. Find what works for you. Find your own trade secrets. Experimentation could be your competitive edge." —Matt Heinz

"CMOs must respond to constantly changing requirements, cross-functional demands, high-performance expectations, and most of all, climbing customer expectations—all benefits of a more formal approach to agile methodologies in marketing."
—Ryan Skinner, Forrester Research[10]

Tests and experiments are key components of this agile marketing approach.

As our marketing teams work to keep up with such a rise in expectations from all sides, it requires us to be dedicated to an experimentation mindset. That means running tests, experimenting to uncover what's working best, and letting data make decisions.

It requires all marketing leaders to embrace the risks—and rewards—of an experimentation mindset on their teams, and to foster the kind of culture that celebrates the pursuit of insight and continual improvement.

"I like to prove myself wrong and find solutions and answers more objectively. I tell myself I'm constantly wrong. I like to keep that attitude because it pushes me to keep finding answers and looking for answers."
—Mike Madden

We hope you've been inspired to deploy your own scientific experiments in marketing. Our hypothesis? Fearless marketers who experiment well are those who win in this era of engagement. Go forth and optimize!

10 Forrester Research, "Agile Methodology Embeds Customer Obsession In Marketing" Ryan Skinner, March 2018

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Carla Johnson, Speaker, Author, Storyteller, and Chief Experience Officer of Type A Communications

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