

## A Marketer's Guide to AI-Driven Personalization.

Making real-time personalization practical.

Personalized customer experience is no longer a debatable goal, it's necessary for customer relationships. It is about as optional as a steering wheel on a car. Customers expect personalization and have little patience when they cannot find what they need from a site or app, or even a digital kiosk. Experience optimization, which uses testing or algorithmic decisioning to determine the best experience for an audience segment or individual, is fundamental to understanding customers well enough to effectively personalize. It's how you measure and improve experiences along with improving your business results. What's new is artificial intelligence's role in both.

### Consumers demand more personalized experiences, but business has been slow to deliver.

Consumers demand more personalized experiences, but business has been slow to deliver. Why are the brakes on? This is a new landscape, with an unfamiliar path. Most marketing efforts are starting along that path, but it's still not obvious what to do. Acceleration is slower than either customers or businesses would like. The challenge lies in building towards maturity: putting the tools and processes in place for delivering personalization where it is warranted at enterprise scale and for each critical digital touchpoint. What's needed is both a blueprint and having the necessary tools and processes in place.

Without AI and mature processes, you can personalize some parts of some customers' experiences, some of the time. You spend your resources to chase down how customers are responding and what to do about it. However, you could spend your time focusing on high value tasks like campaign creation, ideation, and organization.

It's as if you have to keep your eyes glued to the speedometer, and keep hitting potholes and getting lost. Instead, use cruise control, use lane control, and spend your effort managing the journey. This approach is, figuratively, what leaders in personalization have discovered. They take advantage of AI-driven experience

optimization and targeting tools as powerful aids to discovering where to focus their efforts. They continually strive to fine-tune each stage in their customer's journey. By focusing their attention on customer journeys, they know how to organize their priorities, their plans, and their thinking.

Our Adopt-Expand-Embed framework helps you take the required steps towards maturing your practice to meet your personalization goals and requirements.

### What does AI do for personalization?

To reach our personalization goals, we need a clear direction — What does our vision for a personalized engagement with our customers look like? How do we want it to adapt to new campaigns or redesigns? We also need some examples on how to structure the journey. And we need the right vehicle to get us there.

That vehicle is semi-autonomous, with automation that increases your control — Adobe Target AI-driven personalization powered by Adobe Sensei. You get automated logic that you can tweak, customize, and fine-tune to achieve your desired result. You are in control, with transparency on how Adobe Target and Adobe Sensei are making decisions. You are spared time-consuming manual processes — monitoring, babysitting, and sifting through results. These manual processes open the door to human error

— overlooking an insight or opportunity because of the sheer size of the data and analysis requirements. With so much of the minute-by-minute effort of monitoring a campaign eliminated, you can boldly go into territory where you want to go — creating experiences and marketing that reach your audiences in a meaningful way. You can experiment and fail fast, with tools that contain the downside while amplifying the upside.

Experience optimization makes the vision possible. AI makes it more nimble. When customers arrive at your website, you have an opportunity to progressively gather data and begin to learn

about them: their interests, what motivates them, how you can affect their actions. The wealth of information is unwieldy for analysis, in real time or in hindsight. Only some of the data is actually valuable for personalizing experience, but we rarely know which. AI is your talented data science assistant who instantly recognizes and matches patterns and predicts the best path for this customer. Two obvious benefits — you deliver much more effective customer experiences, and you aren't spending so many hours hunched over your analytics trying to figure out which data in your customer profiles is actually predictive.

## What AI brings to testing and targeting

With the addition of artificial intelligence, ongoing, scalable and efficient 1:1 personalization is practical. Here is what AI already brings to testing and targeting:

| CONVENTIONAL TESTING AND TARGETING  | AI-DRIVEN TESTING AND TARGETING: EXPERIENCE OPTIMIZATION  | ADOBE TARGET FEATURE POWERED BY ADOBE SENSEI |
|---|---|--|
| <p><b>Manually analyze data and segments after passive A/B testing.</b></p> | <ul style="list-style-type: none"> <li>• Actively use AI to continuously analyze and decide the best variant to deliver to a segment of individual.</li> <li>• Move beyond a fixed horizon to reach “always on” personalization.</li> <li>• Diminish potential human error in analysis by leveraging machine-learning.</li> <li>• Continuously optimize experiences over time.</li> <li>• Guarantee no machine-decided variation will perform below the best human-designed variation.</li> </ul> | <p>Auto Allocate</p>                         |
| <p><b>Target specific offers to segments utilizing manual rules.</b></p>    | <ul style="list-style-type: none"> <li>• Leverage AI to continuously evaluate and select the next best offer or rank-ordered combination of offers.</li> <li>• Deliver offers to an individual based on a complete evaluation and scoring of their profile data at a given point in the journey.</li> </ul>   | <p>Automated Personalization</p>             |

|  |  |                                     |
|--|--|-------------------------------------|
| <p><b>Manually create rules for recommended products, content or experiences.</b></p>                | <ul style="list-style-type: none"> <li>• Select, customize, and optimize a set of recommendation algorithms including collaborative filtering, content similarity, Natural Language Processing (NLP)-inspired and user-profile based logic.</li> </ul> | <p>Personalized Recommendations</p> |
| <p><b>Manually manage and update rules based on changing campaigns, trends, seasonality etc.</b></p> | <ul style="list-style-type: none"> <li>• Rely on AI's automated analysis and self-optimization to help you dynamically alter what you show next based on changing designs, experiences, and trends.</li> </ul>   | <p>Auto Target</p>                  |

Adobe Sensei contributes AI to four of Adobe Target's most valuable experience optimization capabilities, to deliver personalization.

**Auto Allocate**

Auto Allocate powered by Adobe Sensei is a multi-armed bandit testing algorithm which identifies and allocates traffic for conversion-based activities to discover statistically-significant winners. Winning experiences receive more traffic as the test matures, so you minimize the downside of delivering the lesser experiences and maximize the results of delivering the best performing experience.

Use Auto Allocate when you want to swiftly determine the best performing experience to push live to an audience segment, but want it faster than a traditional A/B test and want to take advantage of the winning experience immediately. It continues to self-optimize with 80% optimized traffic and 20% tested traffic, but guarantees 95% confidence on the winner once it is reached with patented technology.

**Auto Target (“One Click Personalization”)**

Each visitor sees the best performing experience for them on every visit. Adobe Sensei uses multiple machine-learning

models of customer experiences to match each customer to the experience most likely to please them. Use it to automate and personalize layouts, navigation, content blocks, look and feel, anything. For example, a lodging site can use Auto Target to automatically offer tropical beaches in winter to a rewards member whose mobile app engagement shows he prefers warm destinations.

Auto Target is designed to improve experience performance over time by learning what does and does not resonate with consumers. This support grants brands the confidence to go even further with their personalization efforts, without concerns that they're taking risks with their valuable traffic. Thanks to the backup policy feature, marketers can always be assured that no variation will do worse than their best control. The result is that the best experiences will only get better.

**Automated Personalization (“Offers”)**

Deliver the perfect offer, or rank-ordered offer experience, for each visitor every time, automatically.

An ensemble model self-optimizes over time while applying a random forest decision tree ensemble and multi-armed bandit. This capability is best applied to high-level content and offers like

hero images, headlines, and calls to action. For example, Automated Personalization enables a financial services company to make very relevant — and very different — offers to a new homeowner, a recent graduate, and someone approaching retirement.

### Personalized Recommendations

Each visitor gets personalized suggestions from among hundreds, thousands, or even millions of products, items, videos, content, articles, or more. Personalized Recommendations powered by Adobe Sensei are selected based on multiple AI algorithms, including Jaccard similarity, popularity, item based collaborative filtering, or recency/frequency. You can include and customize any of your own algorithms that you have come to rely on.

The recommendations are profile-driven, and can be tweaked with boost, bury, promote, filter, and rules, as well as tested to determine the right algorithm to deliver to different audience segments.

For example, Personalized Recommendations observes that a customer watched its video on eco-friendly laundry techniques and purchased compostable dryer sheets. It can then provide a tailored recommendation about eco-friendly detergent based on what was inferred from the customer's previous actions. This proves tremendously more effective than a laundry detergent recommendation based on detergents other people viewed.

## AI + Targeting: Adopt, Expand, and Embed



### Step 1: **Adopt**



Establish your personalization program. Focus on customer journey end points.



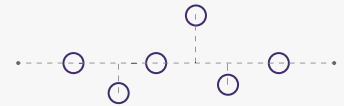
### Step 2: **Expand**



Apply personalization to more areas of customer experience, and involve more internal stakeholders. Focus on important steps in between journey endpoints.



### Step 3: **Embed**



Apply personalization to all areas of customer experience, and involve stakeholders throughout your company. Focus on deeper customer relationships, especially with loyal customers.

Use Auto Target, Auto Allocate, Automated Personalization, and Personalized Recommendations, powered by Adobe Sensei.

*These four important capabilities of Adobe Target powered by Sensei work side-by-side, to create levers for the business user. Use these levers to swiftly determine rules and treatments of experiences utilizing real-time, in-the-moment analysis with transparency on why the algorithm is making its decisions. You are the master, asking this powerful "personalization calculator" to process your formula for delivering the right combination of personalized experiences at each stage of the journey. With these capabilities, you can build your roadmap for achieving personalization maturity.*

Leaders in achieving personalization maturity have stepped through the stages we call **adopt, expand, and embed**. They use their customer journeys to develop their personalization roadmap, and then use experience optimization to perfect their customer journeys.

They lay the foundation for their personalization program by articulating their key success metrics and conversion goals, aligned with business goals and strategy. They have established teams and processes that will support broad participation across stakeholders.

#### **ADOPT.**

After laying the foundation of your program, begin the Adopt phase at your most critical high-value touchpoints, namely around acquisition and conversion.

Customer journeys begin as anonymous traffic to a touchpoint, and your first challenge is to uncover what is needed to personalize that step. What should individuals see based on your current relationship with them? Based on the signals for their preferences within the data? This can take Herculean effort (if Hercules had been a data scientist) and quite a long time, especially with all the available data. By the time you figure it out, the customer is long gone, the data is stale, and the conclusion is only slightly interesting.

Artificial intelligence is immensely helpful at this initial acquisition point, as there is a large diverse mix of new and recent visitors and return customers touching down, creating challenges to delivering personalization at scale. You can't succeed without automation that instantly delivers an answer from your talented data science assistant — Auto Target powered by Adobe Sensei. Personalized Recommendations can reduce the number of clicks it takes for a new visitor to initially find what they want to consume, or a return visitor to find where they left off.

Another high value location is the final step of the customer journey, the conversion event, be it an actual purchase, sign up, registration, or view of an article or a series of videos. How do we nudge more visitors to a successful conclusion? Again, Adobe Target can assist with quickly adapting the conversion experience, and the right offers and experiences for a more satisfying, fruitful conversion.

For time-sensitive campaigns, or to be bolder with some of the versions of your campaigns, Auto Allocate powered by Adobe Sensei can be the in-the-moment adjudicator for quickly rolling out new timely offers and campaigns. Another powerful focus in the Adopt phase is remarketing & retargeting, the first steps in cross-channel personalization — where, how, and what content should you be delivering. Is it a personalized offer, experience and/or recommendations? Within a follow-up email or offsite experience? Adobe Sensei can be there to assist.

#### **EXPAND.**

With positive results and experiences improving at the very highest value touch points in customer journeys, next you can expand to tackle the steps between and around acquisition and conversion. This goes across channels, and also beyond channels. People leave and you want them back.

When you successfully remarket or retarget, you can welcome them back with a finely targeted landing page, leveraging Sensei-powered automation. You can begin to augment their profile data with additional CRM and data feeds, such as offline purchases and customer service interactions. You can use Personalized Recommendations to suggest the articles, video, apps, products, etc that reduce the steps they must take to convert again and again. You can begin to promote the downloading of your mobile application at key moments to provide better customer service and repeat engagements, further leveraging Adobe Target's artificial intelligence and unified profile data.

#### **EMBED.**

The final embed stage is not a destination, but a culmination of the previous maturity stages. Nothing about the customer experience or your marketing is static — all of it will require ongoing maintenance and management. AI is there with automation and analysis as experiences and trends change over time.

The Embed stage is about solidifying your program and ensuring that you are delivering a top notch personalized customer experience that promotes brand loyalty. We know quite a bit about these customers. They give us every opportunity to interact, they usually are known (authenticated) during interactions. Loyal customers have deep relationships with your brand that develop when you help customers reach their goals. Your app may become part of their life. Surely we can perfect personalization techniques in these ideal circumstances, and even extend personalization and feed touchpoints "beyond the browser," including delivering the right offers, experiences and suggestions to digital kiosks, front desks, store clerks, ATMs, etc. Leave no touchpoint untouched, and enable stakeholders to leverage AI to make their decision-making easier in-the-moment.

Deep relationships generally mean that many internal stakeholders are involved. Your personalization center of excellence (COE) enables these stakeholders across your business to participate in personalization projects, making your business and customer experiences more agile. Stakeholders recognize that the customer experience is never finished, influenced by seasonality, fashion, and other trends. They are constantly refining the customer experience, assessing how well they are executing.



Where can we be better at process, or creative, or service. How well tuned and tested is our automation, are we using the best algorithm and logic.

It is at this stage that you are truly in control of customer experience, with the right kinds of automation freeing staff to create and execute campaigns, strategize launches, better understand customers. Adobe Target AI powered by Adobe Sensei handles the minute-by-minute decisions in delivering the best customer experience, and marketing staff are creating and testing new messages, offers, and content to vary and enrich the customer experiences.

## Driving organizational change.

Even among leaders, the personalization vision is not universally embraced within their companies. Where its embraced, people are sometimes uncertain what to do.

You envision how the experience will adapt to customers on their journeys, from first touch, return, and ultimately loyalty. The Adopt-Expand-Embed approach is a highly effective framework for deeper and broader personalization. Leaders have found it so effective in part because it is so natural. You can start where customers start and follow them through their whole experience - making their goals, and your goals, easier to reach.

What's the AAA trip plan? We suggest you start with a shared vision or destination, then look for the most impactful route to success, and finally create a team to get you there.

- **Articulate strategy.** Communicating the destination is the first step. What is strategy for customer experience? What are your goals, and their relative importance? What does your website do? What are your customers goals? Align with both business goals and with the strategic roadmap for customer experience. Ideally, your goals are stated in terms of measurable improvement within a stated time period.
- **Audit for value.** Identify where the value is by focusing on key engagement steps in most important areas of your business. Look at analytics, trends, campaigns to identify where you're not meeting goals and customers aren't sufficiently engaged. Establish the value of improving results in these areas.

- **Establish internal business development team for personalization.** Create a collaborative mesh of stakeholders and supporters, including an executive sponsor. Customers touch nearly everyone in the company, and you can't personalize deeply enough without the support of the rest of the organization and your partners. You need them involved with their sleeves rolled up. Recruiting for the personalization program is internal business development, with the goal of driving the usage of personalization resources. Communicate the value, insights, and successes, to drive yet more usage.

## Your future with AI.

Understanding your customers — making sense of all the wealth of data you have about them — takes time, too much for most human-only teams to even consider. You need business insights, but with machine-learning precision to remove human error and bias.

You need more control over customer experience, customer journeys, optimization and personalization than ever before. With automation, you finally have the resources to strategize, plan, and manage your efforts.

This is where you and Adobe Sensei create a beautiful union — and where Adobe Target & Adobe Sensei shine. You have the ability to understand what the algorithm is doing and the option to customize it. Tap into the power of rapid-fire insights as you see the data, conclusions, and decisioning that's taking place in the algorithms.

Your first milestone on this journey is to conduct your own internal audit of how this will help. Enhance your vision and bring it to Adobe for a blueprint on how to progress.

## Contact a representative to get started.

If you're ready to bring the power of artificial intelligence to your personalization, [contact a salesperson](#) about Adobe Target.