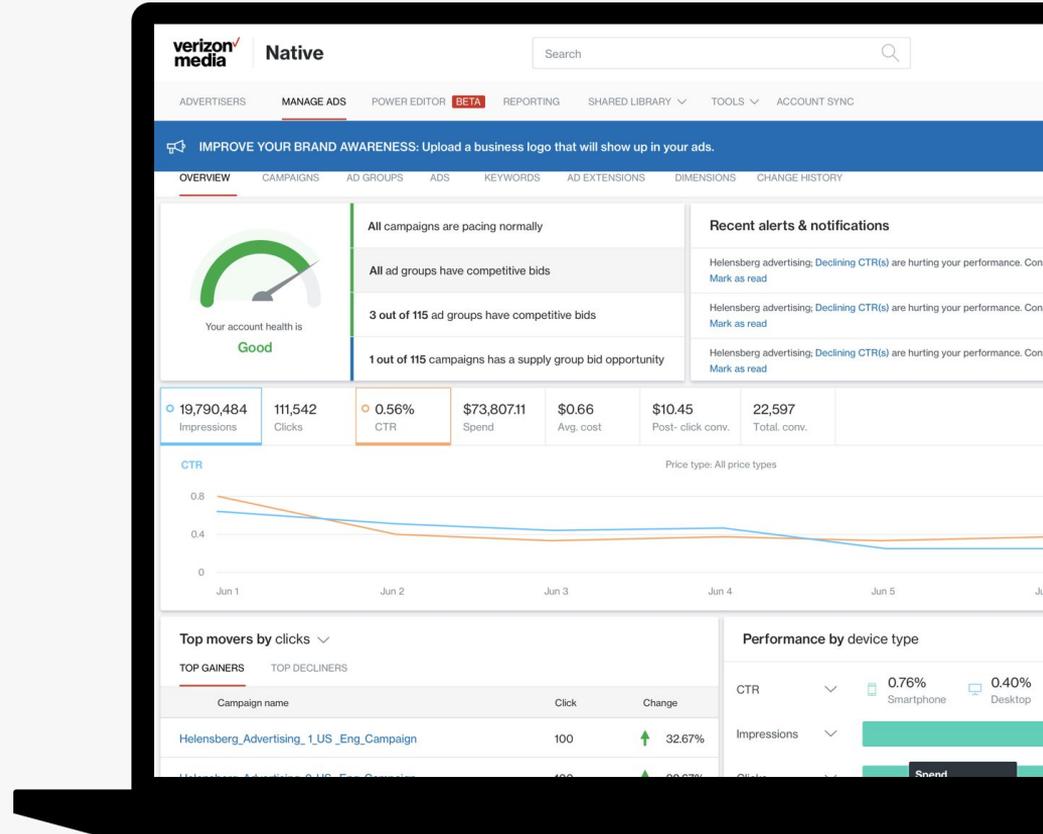


Verizon Media

Enterprise Ad Platforms

Platform: Desktop / web

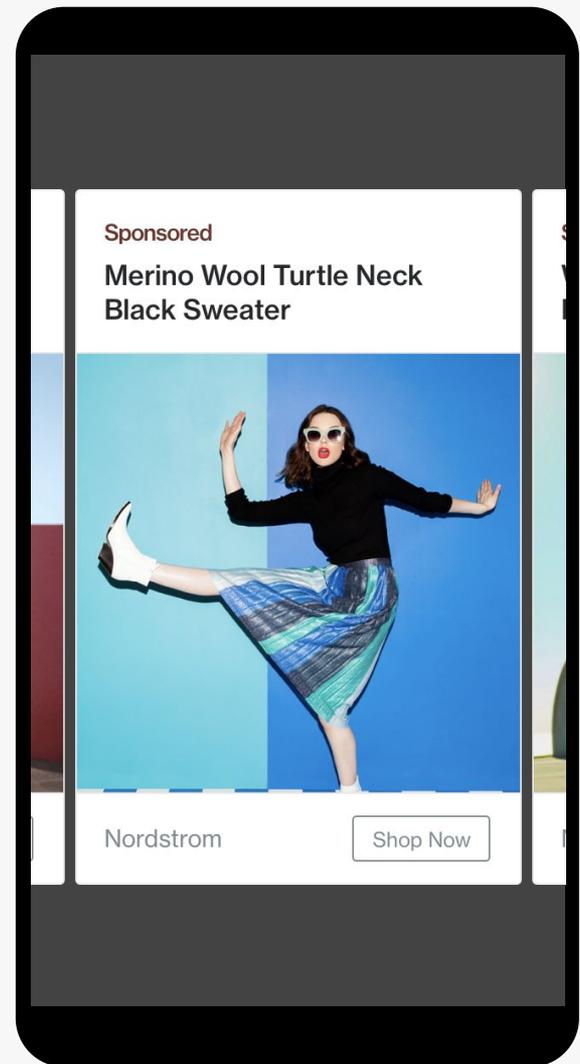
My roles: Product design, documentation,
design system implementation



Case Study

Demand Side Platform: Dynamic Product Ads integration

High level product goal: To migrate a highly successful ad format — Dynamic Product Ads — from Native ad platform to another ad platform (DSP) that is more versatile and has a greater growth rate.



Terminologies

01

Native Platform

The ad booking platform advertisers currently use for booking Dynamic Product Ads with Verizon Media

02

Demand Side Platform (DSP)

A new, high growth ad booking platform where Dynamic Product Ads will be migrated to

03

Dynamic Product Ads (DPA)

The most profitable ad format in Native that will be migrated to DSP

Sponsored
Women's Crop Top Bright Mustard Yellow

Nordstrom Shop Now

Dynamic Product Ads

Recent alerts & notifications

- Helensberg advertising; Declining CTR(s) are hurting. Mark as read
- Helensberg advertising; Declining CTR(s) are hurting. Mark as read
- Helensberg advertising; Declining CTR(s) are hurting. Mark as read

\$10.45 Post-click conv. | 22,597 Total conv.

Performance by device type

CTR	0.76%
Impressions	32.67%

Native Platform

Migrate to

DSP

Advertisers / Medinvest_USA-Citigroup / 2019_Q2_Q3_Fint_NTL_500X_Lifestyle

FT50X_NTL_MOBL_NATIVE VIDEO_PREAP_FL... APR 05 - JUN 30
 FLIGHT RANGE

LINE NATIVE VIDEO ID 2825

INSIGHT LINE PROPERTIES **TARGETING** ADS BID MULTIPLIERS

Template Actions Save

Location

Country/State/DMA/City, Zip Geofencing

TYPE
 Country/State/DMA/City, Zip

Target

COUNTRY

POINT OF INTEREST
 Category/ Chain

- Arts & Entertainment
 - Bars & Pubs
- Agriculture & Livestock
- Arts & Entertainment
 - AMUSEMENT PARKS
 - Busch Gardens Tampa Bay
 - Busch Gardens Williamsburg
 - Canada's Wonderland
 - Cedar Point
 - Disney's Hollywood Studios

Block

Demand Side Platform (DSP)

Design Challenge

How might we ensure a successful transition for Dynamic Product Ads users who are switching from Native to DSP?

Strategy

Definitions of a successful transition

01

Easy adaptation

Existing DPA users will not need to go through a steep learning curve to adapt to the new platform

02

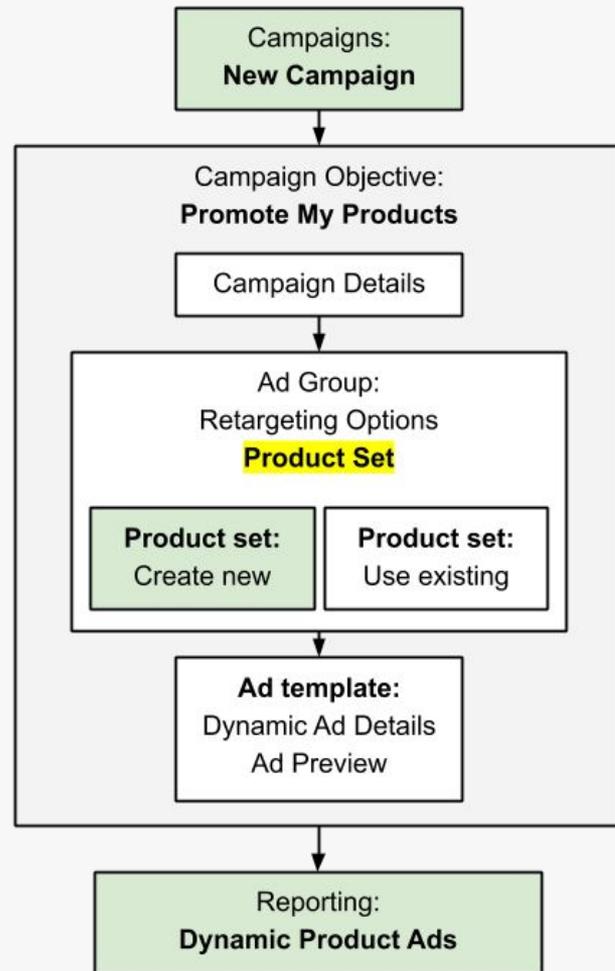
Requires little or no assistance

Complicated tasks can be handled by the system automatically or troubleshooted by the user

Strategy

Understand the feature architecture

I began the project by recreating the user flows to understand the architecture of DPA and how each page contributes to its success. To summarize the result, DPA is consisted of a Campaign, Product Catalog, Product Feeds, Product Sets, and a reporting system.



Research

Reveal the correlations between the tools and users' needs

To visualize the correlation between users' needs and the features being built, I created several personas based on different user stories. In the future, team members will be able to use them as reference if new design interventions are required.

Dynamic Product Ads 1.0



Help me target users who've shown interest in my products

Natalie
Advertiser for Nordstrom

Targeting Product Feed Uploader

Help me to...

I want to serve custom tailored ads based on my product catalog to users that have:

- Visited my website or application
- Viewed product(s)
- Added products to a shopping cart or purchased product(s)

So that I can...

Increase my chances that users will buy my products or services.

Dynamic Product Ads 1.1



Tool: Funnel Targeting
DSP system for Tessa's advertising needs

Feed Ingestion In-target Audiences

Give Natalie the ability to:

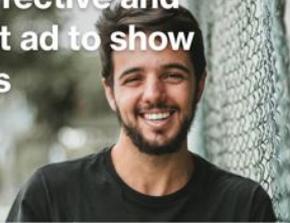
Upload(ingest) her product catalog to DSP

So that DSP can...

- Utilize the product catalog field values per product to build dynamic creative versions based on which products or services that the user has shown an interest in.
- Utilize the most appropriate dynamic creative for other in-target audiences, such as: geographic, POI, weather, custom audiences, and predictive segment audiences.

Dynamic Product Ads 3.0

Help me find the most effective and relevant ad to show to users



William

Advertiser for Walmart

Product Subset Ad Optimization

Help me to...

- 1 Control which specific set of products are viewed by users
- 2 Have the system optimized the best performing version and show to the users

So that I can...

Show the most relevant and effect to ads to users in order to increase my chances that users will buy my products or services

Dynamic Product Ads 3.1



Tools: Product Subset + Creative Optimization

DSP system for Mark's advertising needs

Product Set Dynamic Creative Optimization

Give William the ability to:

Create a subset of products (Product Set) based on inclusion and exclusion rules of product catalog field values

So that he can...

- 1 Create Lineitem targets and budgets
- 2 Assign a specific creative template to a given set of products

In addition, we should:

Serve more than one creative version based on a product set to a single user and have the system optimize to the best performing creative version.

Dynamic Product Ads 2.0

Help me gain insight into my feed status so I can upload my feed successfully



Alison

Advertiser for Airbnb

Error Detection Error Correction

As I upload my product catalog, help me...

- ⚠ If there are any hard errors and warnings
- ✓ The number of products that have been uploaded successfully
- ✗ The number of products that have been removed due to duplication or other hard errors

So that I can...

Fix my errors by updating or replacing the product catalog manually or on a scheduled basis

Dynamic Product Ads 2.1



Tools: Feed Preview + Column Mapping

DSP system for Tessa's advertising needs

Column Mapping Feed Preview

Tell Alison if her feed is formulated correctly:

- 1 Check supported format, encoding
- 2 Check required fields
- 3 If any field values are parsable and with no delimitation issues
- 4 Make sure that creatives that are linked are uploaded into the DSP system so that serving an image within a dynamic creative is fast and reliable

In addition, give Alison the ability to:

Update or replace the product catalog to a FTPs location that DSP has access to on a scheduled basis

Strategy

More insight discovery through user interview

To discover more insights about the DPA flow, I interviewed a Support Team member who helps clients set up their DPAs. According to the Strategist, customers usually contact him for assistance while setting up online tracking (Dot Tag) for DPA. It is a time consuming process as he has to constantly email the correct Dot Tags to the clients for their tracking to run successfully.

Dot Pixel Setup - Questions to ask:

Can you describe how you currently setup a Dot Pixel?

Goal: Help client change Pixel to actual Dot Tag ID

High level flow: Code produced > deliver > published > verified > launch > tag > feed setup

1. Manually generate the script
2. Copy script
3. Enter Pixel ID manually
4. Email client the script and indicate the place to insert manual input for:
 1. Product ID
 2. ea: Event (e.g. View product, added to cart) (? - should be autogenerated?)
 3. ga: Revenue. Also used for
 1. In gemini, creating a new conversion rule: 3 options, 3rd option: each convert. Has a different value
 2. Reporting, enable to enable Return On Ads and S
 3. As an input as a model of audience, for retargeting

What can be improved or your suggestions?

1. The UI should have the ability to export the script with Pixel ID in it
2. Push a button and script comes out with the correct pixel ID instead of 1234
3. Validation: PM's interest in verification - client goes to Splunk
 1. Both client and sales can tell error
1. Client should have the code ready in UI. Improvements:
 1. Production of the tag flow for retail clients
 2. Verifications of the tag flow
1. Hunter: to send an example of email

Role: **Sales engineer / technical consultant**

Research

Get a holistic view of the product

To get the full picture of the DPA workflow, I created two user journey maps to represent the system differences, what an advertiser must go through in order to create a DPA, and the new pages that need to be built in DSP.

Gemini

Dynamics Product Ads Journey Map

	Dot Tag Extraction	External UI	Product Catalog Setup	
LOCATION	Navigation > Dot Tag	External (Advertiser's site)	Shared Library > Product Catalog	Product Catalog
TASK	View Dot Tag Copy Dot Tag code	Setup Dot Tag Place Dot Tag code	Upload Product Feed Click on New Feed button	Check Feed Failure or success
NOTES	User can view and copy get Dot Tag Code on this page	Place Dot Tags on website. Then, place a Custom Event Script.	Feed format: .csv, .tsv, .xml, .txt or .rss. Feed sharing: via [External] FTP over SSL.	User can view Tag Code on
UX ISSUES		Difficulty setting up Dot Tag. Prompt to errors due to wrong implementation.	Currently handled by Account manager experts on the Gemini team. Unable to validate columns and no support for quick fixes or troubleshoot. Cannot upload a small section of the feed for validation. [Solution] Column Mapping feature post-upload in right rail. (WIP)	

DSP

Dynamics Product Ads Journey Map

	Dot Tag Extraction	External UI	Product Catalog Setup	
LOCATION	DSP Seat > Advertiser > Pixel	External (Advertiser's site)	Advertiser > Product Catalog	Product Catalog
TASK	View Pixel Copy Dot Tag code	Setup Pixel (Dot Tag) Place Dot Tag code	Upload Product Feed Click on New Feed button	Check Feed Failure or success
NOTES	Use Get Code button or use inline icon on Advertiser page.	Place Dot Tags on website. Then, place a Custom Event Script.	Feed format: .csv, .tsv, .xml, .txt or .rss. Feed sharing: via [External] FTP over SSL.	Use Update H status

NEW

Gemini

Dynamics Product Ads Journey Map

	Dot Tag Extraction	External UI	Product Catalog Setup			Campaign Creation					Reporting
LOCATION	Navigation > Dot Tag	External (Advertiser's site)	Shared Library > Product Catalog	Product Catalog > Update History	Shared Library > Product Catalog	Campaigns	Campaigns > New Campaign	Campaigns > New Campaign	Campaigns > New Campaign	Campaigns > New Campaign	Navigation > Reporting
TASK	View Dot Tag Copy Dot Tag code	Setup Dot Tag Place Dot Tag code	Upload Product Feed Click on New Feed button	Check Feed Status Failure or success	Define Product Set Configure product set	Create New Campaign Click on New Campaign button	Campaign Objective Objective selection	Campaign Details Provide details for campaign	Ad Group Details Define product set and provide target audience configuration	Ad Template Customize and preview ad	Reporting Monitor ad performance
NOTES	User can view and copy get Dot Tag Code on this page	Place Dot Tags on website. Then, place a Custom Event Script.	Feed format: .csv, .tsv, .xml, .txt or .rss. Feed sharing: via [External] FTP over SSL.	User can view and copy get Dot Tag Code on this page	Choose which products you'd like to retarget and which ad groups you want to retarget those products from.	N/A	Select Promote My Products for DPA (Dynamic Product Ads)	General information, Define audience, and campaign settings.	Define the part of the purchase journey your target audiences are on.	Customize your dynamic ad using parameters from your feed, for example, {title} – {price}.	Set up a new report with Dynamic Product Ads.
UX ISSUES		Difficultly setting up Dot Tag. Prompt to errors due to wrong implementation.	Currently handled by Account manager experts on the Gemini team. Unable to validate columns and no support for quick fixes or troubleshooting. Cannot upload a small section of the feed for validation.		[Solution] Column Mapping feature post-upload in right rail. (WIP)						

DSP

Dynamics Product Ads Journey Map

	Dot Tag Extraction	External UI	Product Catalog Setup	Product Catalog Setup	Product Catalog Setup	Campaign Creation	Line Configuration	Line Configuration	Line Configuration	Line Configuration	Insight
LOCATION	DSP Seat > Advertiser > Pixel	External (Advertiser's site)	Advertiser > Product Catalog	Product Catalog > Update History	Product Catalog > Product Sets	Advertiser > Campaigns	Campaigns > Lines	Campaigns > Lines	Campaigns > Lines > Creative	Campaigns > Lines > Targeting	Insight > Campaign Report
TASK	View Pixel Copy Dot Tag code	Setup Pixel (Dot Tag) Place Dot Tag code	Upload Product Feed Click on New Feed button	Check Feed Status Failure or success	Define Product Set Configure product set	Create New Campaign Click on New Campaign button	Create New Line + Campaign Objective Click on New Line button	Create New Creative Click on New Creative button	DPA Config. + Preview On Creative page	Targeting (TBD) Two entry points: Advertiser and Line page	Insight DPA performance
NOTES	Use Get Code button or use inline icon on Advertiser page.	Place Dot Tags on website. Then, place a Custom Event Script.	Feed format: .csv, .tsv, .xml, .txt or .rss. Feed sharing: via [External] FTP over SSL.	Use Update History to see Feed status	Choose which products you'd like to retarget and which ad groups you want to retarget those products from.	A campaign is an advertising goal that defines a strategy for delivering ads within a set time period.	Select Campaign Objective as part of early step of Line item configuration.	N/A	Select: (1) Format: Display (2) DPA, (3) Product Catalog (4) Product Set (5) Ad details	Identify and target audiences based on a variety of demographic data.	N/A
			NEW	NEW	NEW		NEW		NEW	NEW	

Journey Maps of Gemini and DSP

Opportunities

After consolidating the research findings, I was able to identify two major pain points in the DPA Workflow

01 Tracking code setup

Unclear instructions on how to set up Event Tracking Code (Dot Tag)

02 Product Feed upload

No validation for feed data and troubleshooting is inefficient

Opportunity #1

How might we reduce Support Team's workload by helping clients set up the Event Tracking Code correctly?

Solution

Provide guidance on the Event Code extraction page

A lot of our clients do not know how to set up an Event Code to make it work for the purpose of online tracking. As a result, the support team is contacted so that a proper instruction could be emailed to the user. **For the final solution, I included the instructions for editing the Event Code for each tracking needs so that clients are able to set up their own script and get tracking running on their websites.**

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PIXELS

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gen App

app Conv

Get Pixel Code



Select A Pixel

test1a (10092672)

JavaScript Image

Pixel Code

INSTRUCTIONS

Place this tag on the page of your website you want to track.

1. Copy and paste the below code inside the <head> tag, on the page of your website you want to track.
2. To verify that the tag is working correctly, go to the Tag List view and you should see the number of users who visited your page.
3. You can now start using your Conversion/Retargeting rules in your Campaigns.

Enable Advanced Matching ⓘ

```
<script type="application/javascript">(function(w,d,t,r,u){w[u]=w[u]||[];w[u].push({'projectId':'10000','properties':{'pixelId':'10092672'}});var s=d.createElement(t).src=r;s.async=true;s.onload=s.onreadystatechange=function(){var yrs=this.readyState;w[u].if(rs&&rs!="complete"&&rs!="loaded")return}try{y=YAHOOWya.I3N.fireBeacon;w[u]=[];w[u].push=function(p){y(p)};y(c)/catch(e)};var scr=d.getElementsByTagName(t)[0];par=scr.parentNode;par.insertBefore(s,scr)})(window,document,"script","https://s.yimg.com/wi/yt.js","dotq");</script>
```

Event Code

INSTRUCTIONS

Place this tag on the page of your website you want to track.

This push script requires the base JS tag code to be executed on the same page as this push script will be placed and in all cases the base tag needs to execute prior to the push script executing. If the push script is being placed in an IFrame container tag the base tag also needs to be placed within the IFrame container tag.

Hard code event value ⓘ

```
<script type="application/javascript">window.dotq = window.dotq || [];window.dotq.push({{ 'projectId': '10000', 'properties': { 'pixelId': '10063754', 'userEmail': '<email_address>' 'qstrings': { 'et': 'custom', 'ec': '{INSERT_MACRO_HERE}' } } });</script>
```

1. Copy and paste the below code inside the <head> tag, on the page of your website you want to track.
2. To verify that the tag is working correctly, go to the Tag List view and you should see the number of users who visited your page.
3. You can now start using your Conversion/Retargeting rules in your Campaigns.

```
<script type="application/javascript">(function(w,d,t,r,u){w[u]=w[u]||[],w[u].push({projectId:'10000';properties:
{pixelId:'10092411'};vars=d.createElement(t),src=r,s.async=true,s.onload=s.onreadystatechange=function(){var y,rs=this.readyState,c=w[u].if(rs&&rs!=""complete"&&rs
="loaded")return}try{y=YAHO.ywa.H3N.fireBeacon;w[u]=[];w[u].push=function(p){y(p)};catch(e){};var scr=d.getElementsByTagName(t)
[0],par=scr.parentNode;par.insertBefore(s,scr)})(window.document,"script","https://s.yimg.com/wi/yt/js","dotq");</script>
```

Event Code

INSTRUCTIONS

Place this tag on the of your website you want to track.

This push script requires the base JS tag code to be executed on the same page as this push script will be placed and in all cases the base tag needs to execute prior to the push script executing. If the push script is being placed in an IFrame container tag the base tag also needs to be placed within the IFrame container tag.

Hard code event value

```
<script type="application/javascript">
window.dotq = window.dotq || [];
window.dotq.push(
{
  'projectId': '10000',
  'properties': {
    'pixelId': 'Should be auto generated',
    'qstrings': {
      'ef': 'custom',
      'ea': 'Purchase',
      'product_id': '[product_id value]',
      'gv': '[revenue]'
    }
  }
});</script>
```

Event Code not working?

Replace script values with custom data

Find the below Conversion Data Key(s) and replace the bracketed value with [your custom data]. [Learn more](#)

'product_id': [product_id value]

'gv': [revenue] ⓘ

Event Code not working?

Replace script values with custom data

Find the below Conversion Data Key(s) and replace the bracketed value with [your custom data]. [Learn more](#)

'product_id': [product_id value]

'gv': [revenue] ⓘ

Event Code setup instruction

Event Tracking Code extraction page

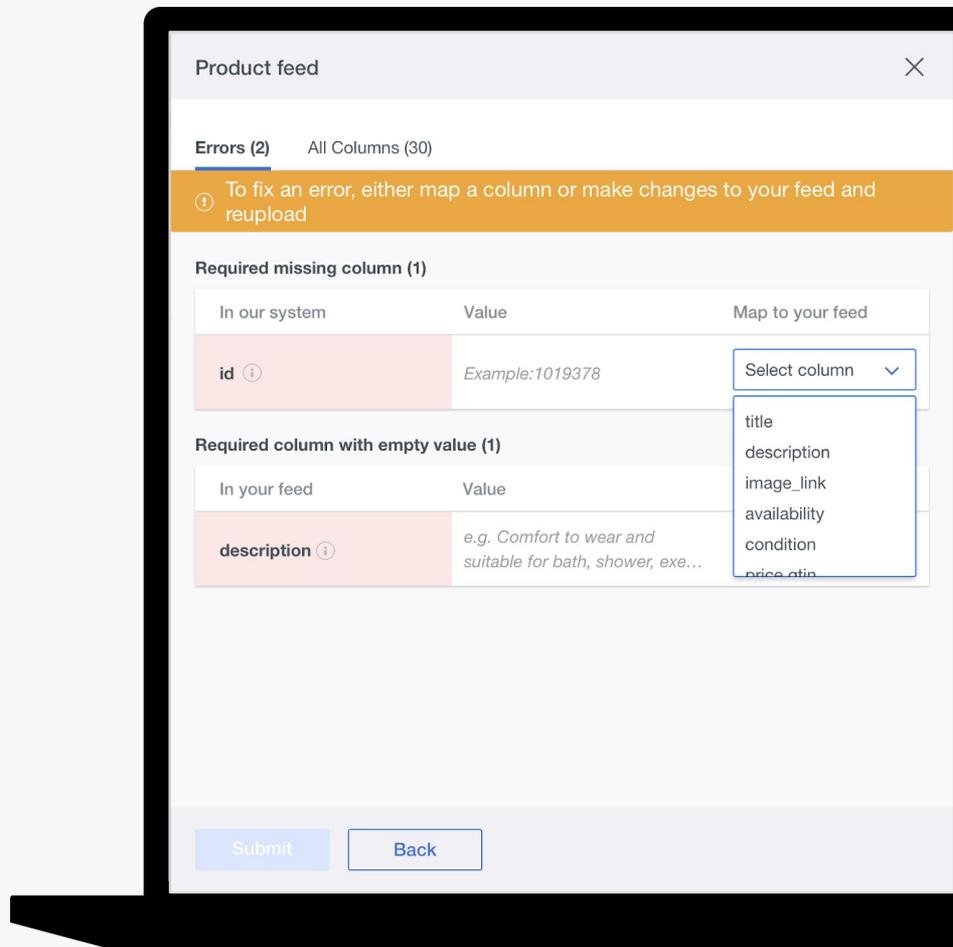
Opportunity #2

How might we increase the number of successful feed uploads by streamlining the feed submission process?

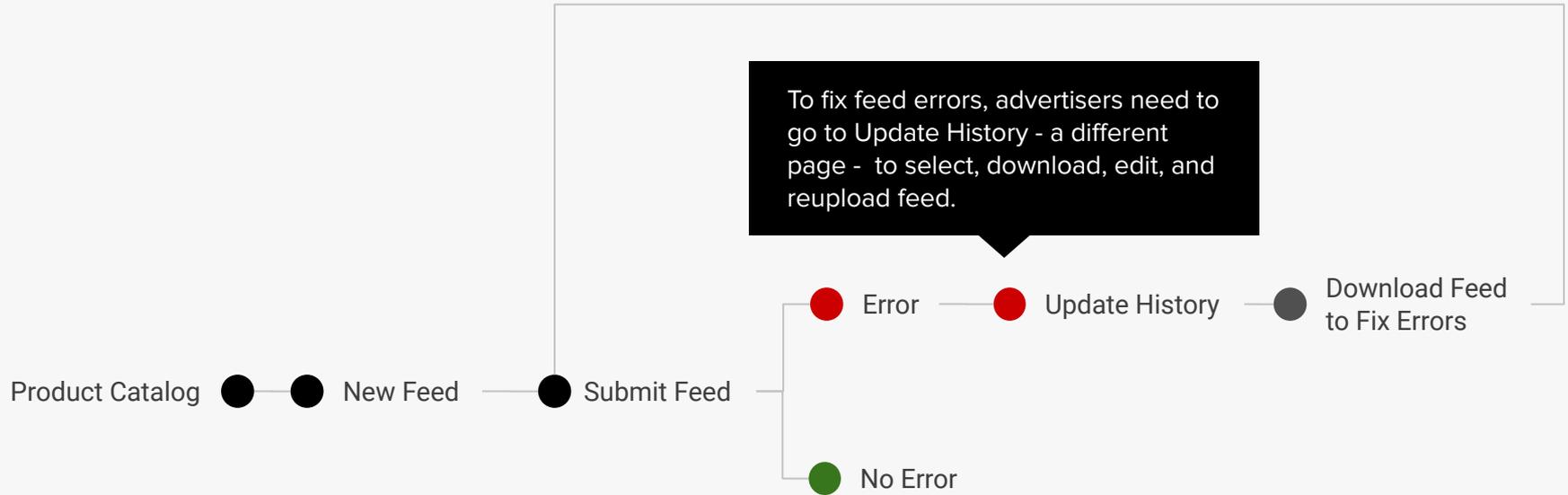
Solution

A feed validator for mismatched columns

Another major pain point is caused by the absence of an error handling system. Which makes it difficult for an advertiser to know the status of the feed and prevent error prior to uploading the file. Most of the time, users would contact the support team to troubleshoot and resulted in heavy workloads for our support team. **To resolve this issue, I proposed a feed validator that highlights all the mismatched columns before the file submission.**

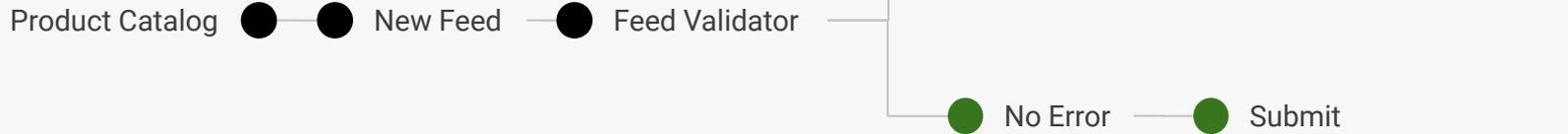


Current Feed Submission Workflow



New Feed Submission Workflow

Feed validator highlights all the mismatched columns in the feed, giving the user an opportunity to fix all the feed errors before the submission.



Proposed
Feed Validator Workflow

Native & Search

Account > Settings > New Deal > Reporting > Secretariat (1) > Deal

Product catalog

Search Default On Tag 00AM 427T 40 Active
Found 1 tag

PRODUCT FEED | Product ID | Location

[New Feed](#) | [Admin](#) | [Management](#)

Name	ID	Status
Tag, ID: 00AM 427T 40	12000	Ready
Tag, ID: 00AM 344200	12000	Ready
Tag, ID: 00AM 344200	12000	Ready
Tag, ID: 00AM 344200	12000	Ready
Tag, ID: 00AM 344200	12000	Ready
Tag, ID: 00AM 344200	12000	Ready

Out: Ad Platforms

Product feed

Errors (2) | All Columns (2)

To fix an error, either make a change in how things are in your feed and reupload.

Required missing column (1)

In our system	Value	How to fix feed
ID	Example 12345678	Select column

Required column with empty value (1)

In your feed	Value
Description	e.g. Example's example supplier's name, product desc.

[Done](#) | [Back](#)

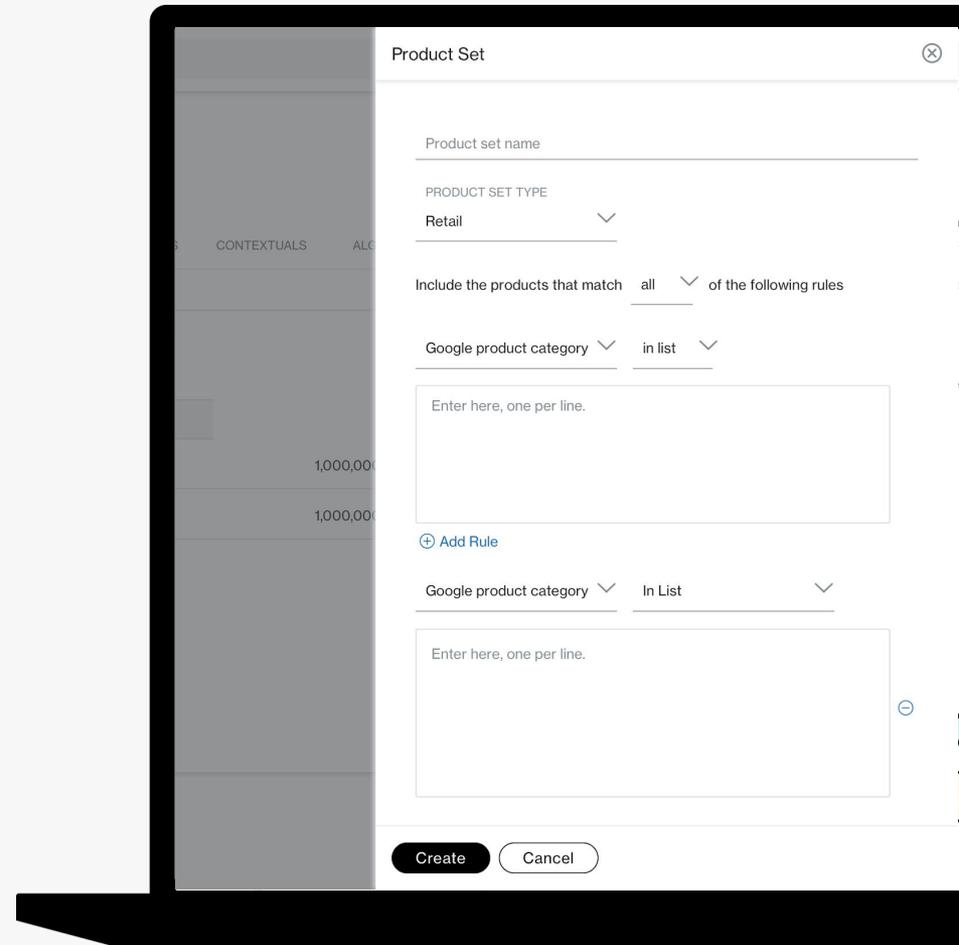
Opportunity #3

How might we make it easier for current DPA users to transition to a new platform?

Solution

Ensure familiarity

The final design focuses on minimizing the advertiser's effort and time-spent to learn about the new system. The new DPA workflow in DSP is not drastically different than the workflow in Native. The naming of the features and most interactions, such as using a right rail as a content upload form, are consistent with the design in the old platform to ensure an easy transition for the existing advertisers.



Funnel Targeting comparison: Gemini v.s. DSP

Although the interfaces of the two platforms are very different, the proposed design in DSP had minimized the learning curve by adopting the same terminologies and actionables as they are in Gemini.

Funnel targeting options

- Viewed, added to cart, or purchased**
Promote Gemini Swags to people who viewed, added to cart, or purchased them in the last days
- Viewed but not purchased**
Promote Gemini Swags to people who viewed but did not purchase them in the last days
- Added to cart but not purchased**
Promote Gemini Swags to people who added to cart but did not purchase in the last days
- Customized funnel targeting**
Promote Gemini Swags to the custom audience based on how people interacted with products

DPA Funnel Targeting in **Native**

Funnel Targeting [Undo](#) [Clear All](#)

Promote all products to people who

SHOPPING EVENT IN THE LAST

Viewed, added to cart, or purchased Day(s)

- Viewed but not purchased
- Added to cart but not purchased
- Customized funnel targeting

Country/State/DMA/City, Zip Geofencing

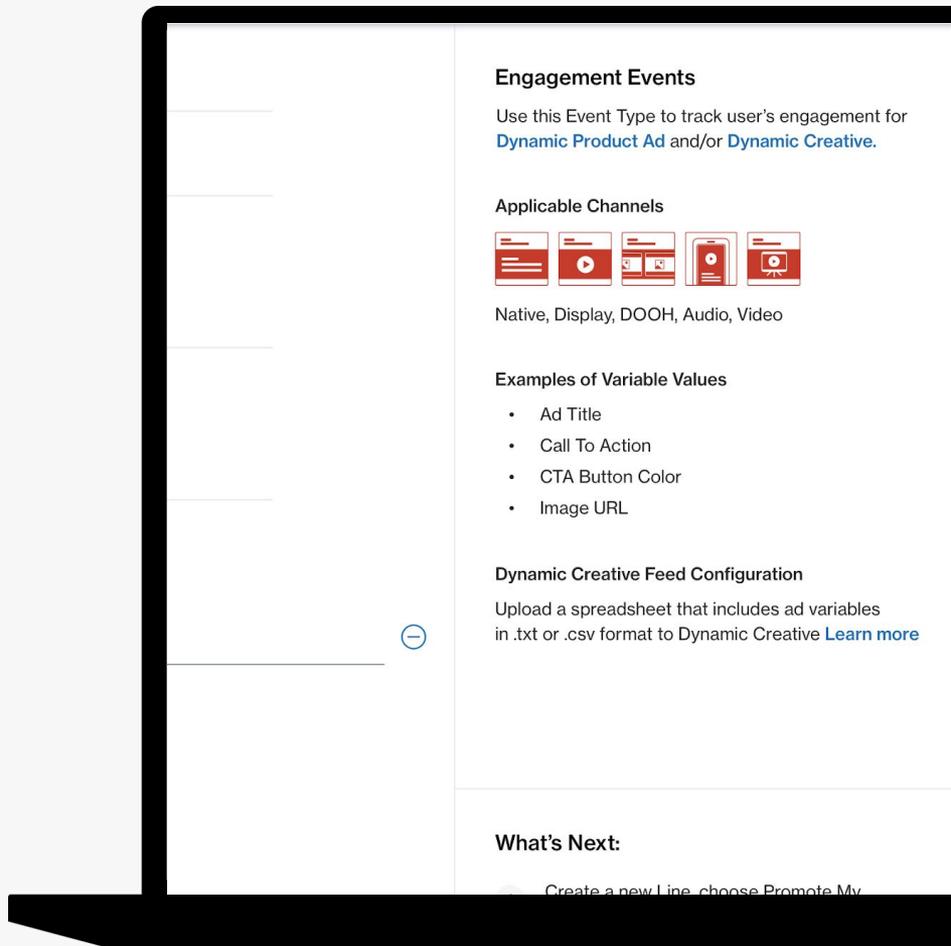
DPA Funnel Targeting in **DSP**

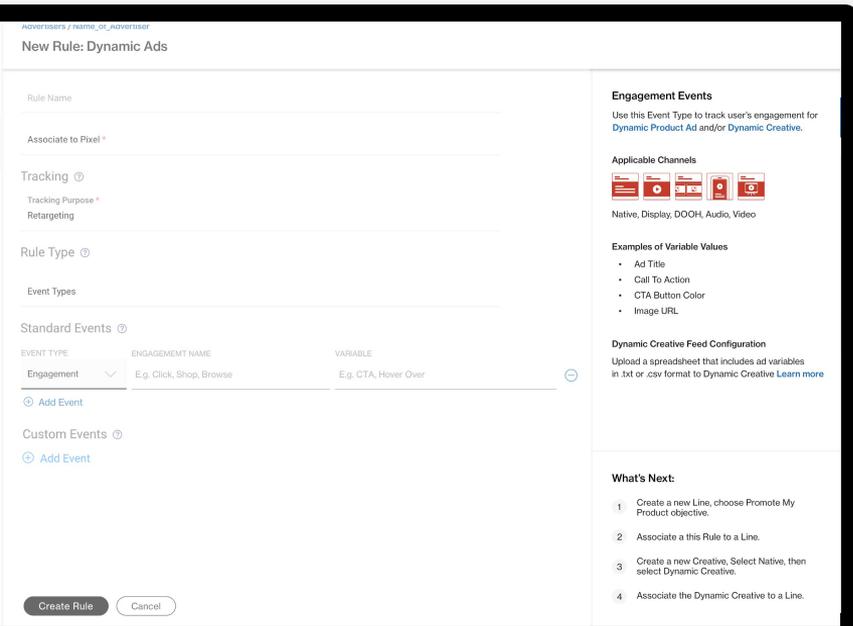
Solution

Increase discoverability and provide guidance

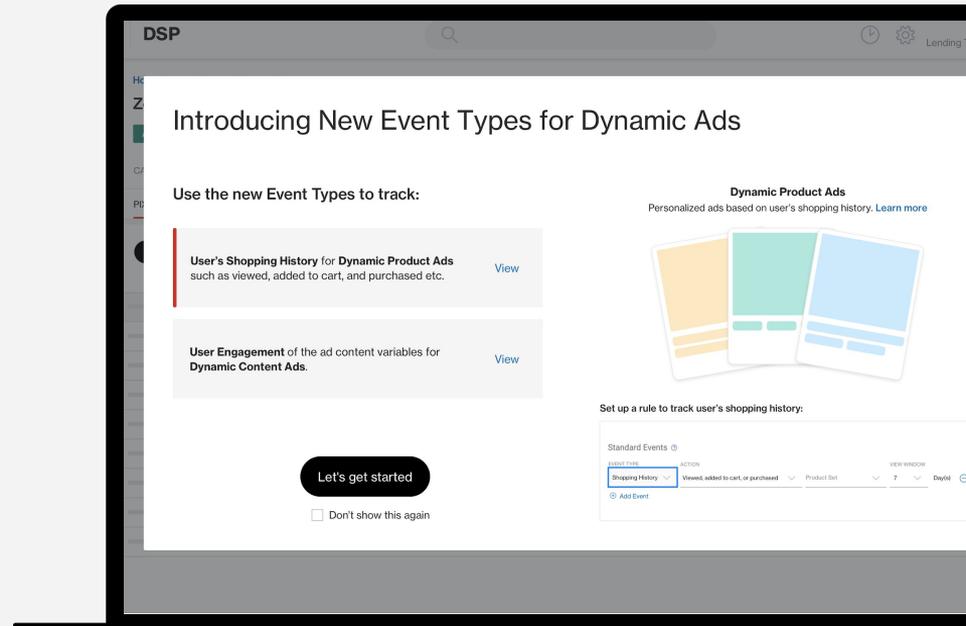
When the new features of DPA are being introduced to DSP, we want to make sure they are discoverable by both the new and existing users.

For the final design, I've added a **splash screen** on Events targeting page and a useful **info section** that educate the users about what a DPA event type is, its benefits, and implementation instructions.





DSP Right rail info section



DSP Event page splash screen

Reflection

01

Focus

Have a clear problem statement by focusing on users' goals and the final impact - design around that.

03

Documentation

Good documentation of design rationale, product requirements, and user stories are the keys to the team's success as they enable designers to make informed decisions in the future.

02

Strategy

Empathize with users through developing a strategic design research plan to gain insight into the core UX issues.

04

Holistic Design

Investigate every single touch point in a user journey and provide impactful solutions to all friction points