



blackbaud®
**DEVELOPERS’
CONFERENCE**
June 15–17, 2021

Integrating Web Analytics with Luminate Online®

IMPLEMENTATION STRATEGIES FOR INTEGRATING
GOOGLE TAG MANAGER, GOOGLE ANALYTICS, ADOBE
LAUNCH, AND ADOBE ANALYTICS INTO BLACKBAUD
LUMINATE ONLINE®

ELIZABETH MAKAYED & CARL DIESING

Technical Services Director & Managing Director



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- Providing direct support to answer questions regarding Customization specifications, features, intended usage, and Error correction and troubleshooting processes to Your Non-Authorized Users



 @makbeta7



 @carldiesing

Hello! I'm Elizabeth Makayed & I'm Carl Diesing

Pronouns: She/Her/Hers

He/Him/His

CALIFORNIA & NEW YORK

15 + YEARS EXPERIENCE EACH IN LUMINATE ONLINE

Elizabeth joined DNL in 2013, having worked for GetActive and Convio in the past; she's been working with this digital fundraising technology since 2006.

Carl co-founded DNL OmniMedia in 2006 as an agency dedicated to helping nonprofit organizations maximize their technology for social good.

Why Does My Organization Need Analytics?



www.timoelliott.com

“When you two have finished arguing your opinions, I actually have data!”

Analytics Can Help Answer Some Questions:

- Which fundraising strategy brings in the most revenue?
- Which donation forms are most effective?
- Where do the users drop off in the transaction flow?
- What errors prevent users from completing transactions?

What Analytic Tools Should My Organization Use?



Adobe Launch



Adobe Analytics

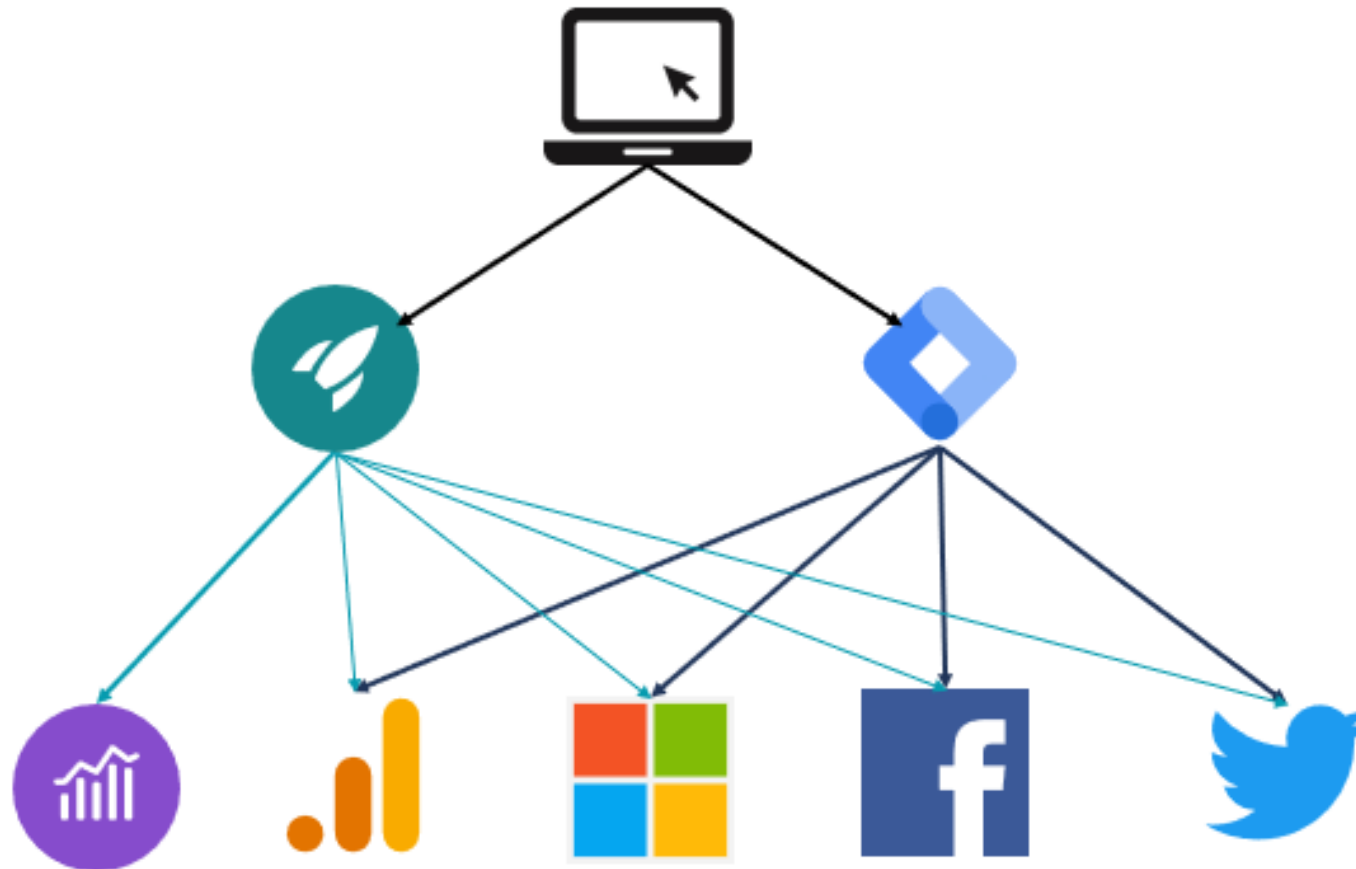


Google Tag Manager



Google Analytics

What Are Tag Managers?



What Are the Benefits of Tag Managers?

- One central place to manage analytics data
- Analytics code separation to limit breakages
- Easy-to-use user interface for configuring rules and events
- Distribution of data to multiple data consumers



What Data Should I Collect?

Data should be collected based on the need. The following questions should help you get started:

- Which Luminate revenue streams do we need to review?
- What information do we want to collect for each revenue stream?
- Do we have affiliates that help drive the revenue?
- Should we track affiliate references?
- Do we need to know conversion rates?
- What errors do our users struggle with?
- Do we need to know which transaction flow is most successful?



Data Collection Best Practices

Don't Do

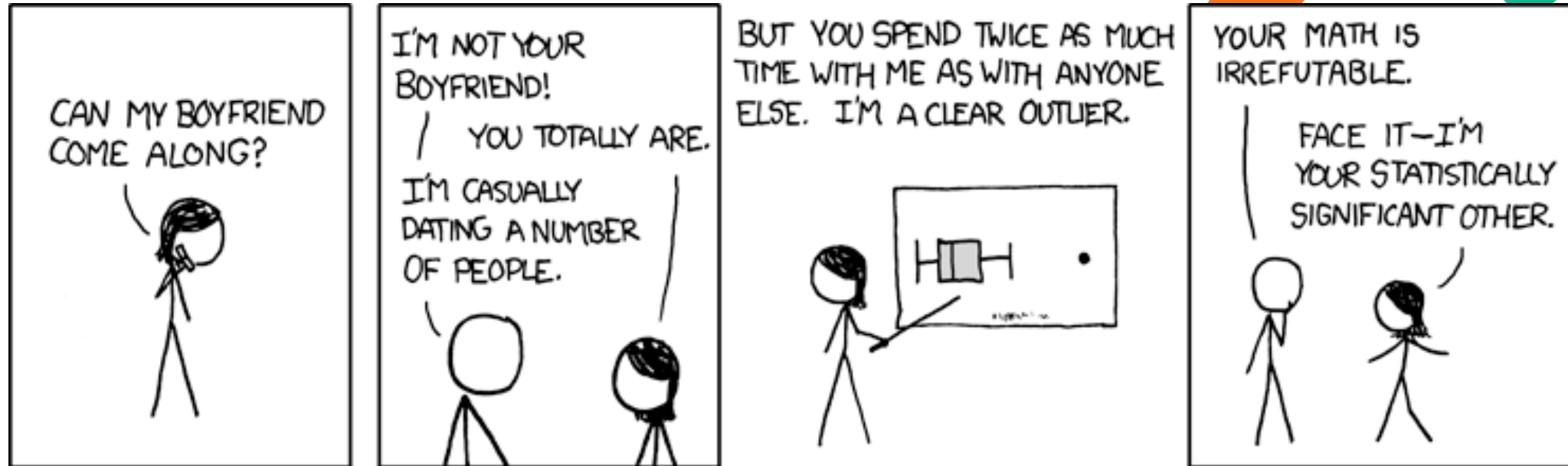
- Omit easily available or critical data
- Collect part of the data
- Create different and confusing naming conventions for products

Do

- ✓ Collect all available data points
- ✓ Create a logical and uniform product naming conventions
- ✓ Document all data naming conventions

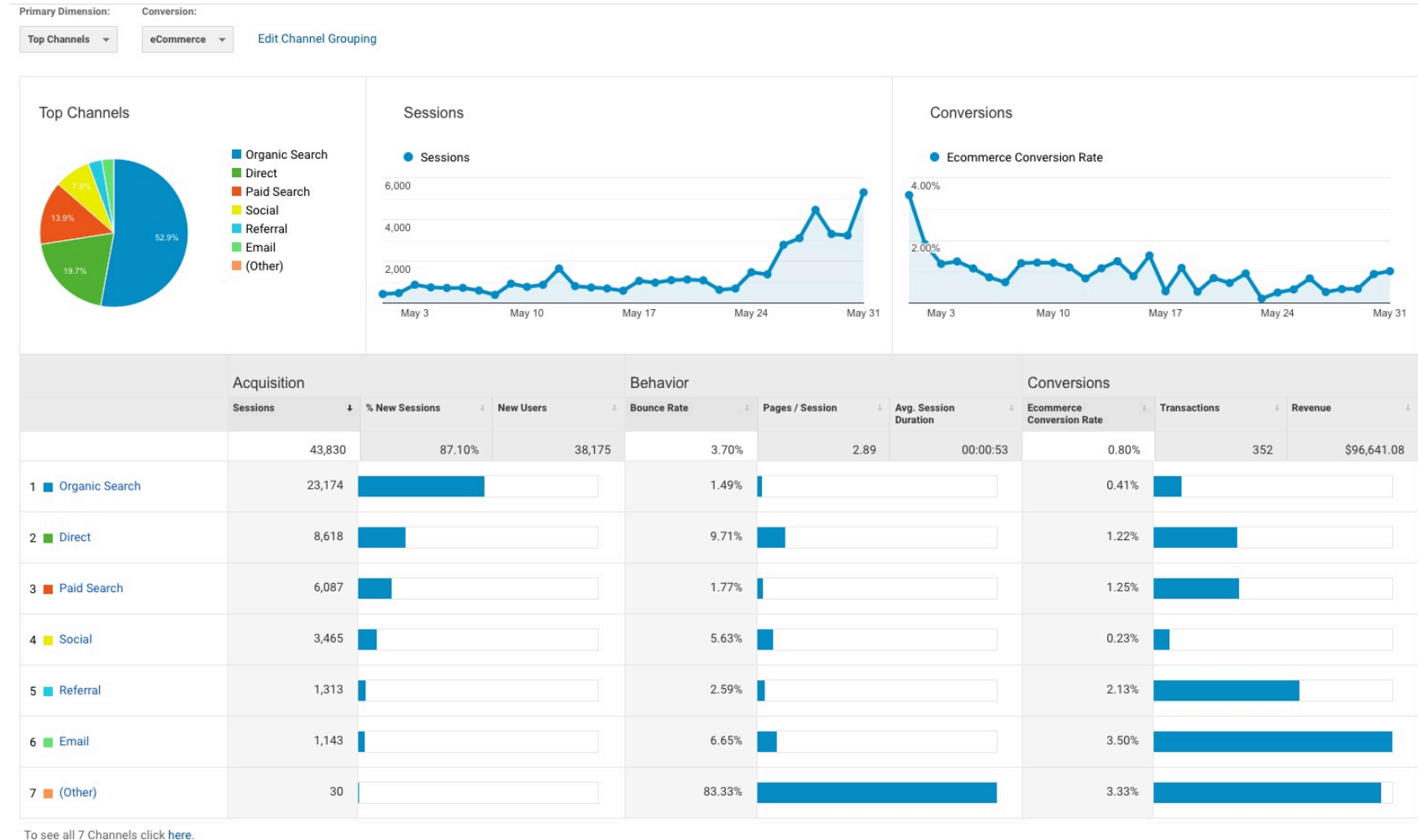


The Goal of Data Collection



How Should We Track Fundraising Data?

All nonprofit transaction revenue streams should be reported to analytics as products.





How Should I Name Fundraising Products?

A thoughtful approach is one of the main ingredients for long term success.

Define conventions for the following product parameters based on your organization's needs.

Product fields commonly set in analytics:

- ***Affiliation*** - generally would denote product attribution to a referrer or affiliate
- ***Brand*** - this field can be used to designate a campaign of a broad category of products
- ***Category*** - product category
- ***Name*** - product name that will be used to uniquely identify a product
- ***SKU*** - a more technical value for each product

What Naming Conventions Do You Use?



Affiliation

- Name of the site or a center name for clients that use multi-affiliate instance of Luminate

Brand

- *Donation forms* - donation campaign name
- *E-commerce stores* - store name
- *TeamRaiser events* - public event type
- *Calendar events* - event category

Product Category

- *Donation forms* - **Donation**
- *E-commerce stores* - **E-commerce**, last visited store category can be optionally added as well
- *TeamRaiser events* - **TeamRaiser**
- *Calendar events* - **Events**

What Naming Conventions Do You Use?



Product Name

- *Donation forms* - Donation, form id, form name, preview mode suffix, if transaction is done in preview mode
- *E-commerce products* - E-commerce, store id, product name
- *TeamRaiser events* - TeamRaiser, event name, registration or donation designation based on user's selection, participation type selected for registration
- *Calendar events* - Events, event id, ticket name

Product SKU

- *Donation forms* - **donation-**, form id, donation frequency, preview mode designation
- *E-commerce products* - **ecomm-**, store id, product name
- *TeamRaiser events* - **teamraiser-**, event name, registration or donation designation based on user's selection
- *Calendar events* - **event-**, event id, ticket name

How Do I Configure Code in Luminate?

- Put analytics code into one PageBuilder reusable page
- Insert the PageBuilder reusable into all active wrappers
- Use S-tags whenever possible to render the data
- Use pure JavaScript to parse the expected output otherwise
- Make code readable for humans not just machine
- Document your dependencies
- Use one generic event name such as **transactionCompleted** for all transactions
- Set transaction errors in the data layer to improve data & debugging



Luminate Code Example - Donations

Set conditions when transaction analytics code should fire

```
[[?x9x::x[[S4]]x::  
  [[?[[A14]]::/completed::  
    <!-- Donation transaction complete code will live here -->  
  ::  
    <!-- Code for transaction errors will live here -->  
  ]]  
: :]]
```



Luminate Code Example - Donations

Define variables, and set values

```
var analyticsAffiliation = '[[T6: [[S0:SITE_NAME]]] ]';
var analyticsCategory = '[[T6: [[S120:dc:campaignName]]] ]';
var analyticsCurrency = '[[S72:currency_code]]';
var analyticsPaymentMethod = '[[?x[[S334:extproc]]x::xx:: [[S120:dc:creditCardType]]:: [[S334:extproc]]] ]';
var analyticsProductName = 'Donation [[S334:df_id]]: [[T6: [[S120:dc:donationFormName]]] ]';
var analyticsProductPrice = [[E130: [[S120:dc:giftAmount]] number]];
var analyticsRevenue = [[E130: [[S120:dc:taxDeductibleValue]] number]];
var analyticsProductSku = 'donation-[[?xmonthsxquartersxyearsx::x[[S120:dc:recurringFrequencyUnit]]x::
  [[E130:"[[S120:dc:recurringFrequencyUnit]]" "s" "ly" replaceall]]::one-time]]-[[S334:df_id]]';
var analyticsShipping = [[?xx::x[[S120:dc:shippingCharge]]x::0:: [[E130: [[S120:dc:shippingCharge]]
number]]];
var analyticsTransactionId = '[[S120:dc:trackingCode]]';
var analyticsTax = 0;
```

Luminate Code Example - Donations

Set values into the data layer

```
dataLayer.push({
  'event': 'transactionComplete',
  'ecommerce': {
    'currencyCode': analyticsCurrency,
    'purchase': {
      'actionField': {
        'id': analyticsTransactionId,
        'affiliation': analyticsAffiliation,
        'revenue': analyticsRevenue,
        'tax': analyticsTax,
        'shipping': analyticsShipping,
      },
      'products': [{
        'name': analyticsProductName,
        'id': analyticsProductSku,
        'price': analyticsProductPrice,
        'category': analyticsCategory,
        'brand': analyticsBrand,
        'quantity': 1,
      }]
    }
  }
});
```

Luminate Code Example - Donations

Configure error handling code

```
<script type="text/javascript" id="analytics--ecommerce-variables">
  document.addEventListener("DOMContentLoaded", function(event) {
    var donationErrors = document.querySelectorAll('.field-error-text');
    var errorEventCategory = 'luminate donation';
    var errorEventAction = 'error';
    var errorEventLabel = '';
    var errorEventValue = donationErrors.length;

    if (donationErrors.length > 0) {
      for (i = 0; i < donationErrors.length; i++) {
        errorEventLabel += ' ' + donationErrors[i].innerHTML;
      }
      /**
       * Track the error with Google Tag Manager
       */
      window.dataLayer = window.dataLayer || [];
      dataLayer.push({
        'event': 'donationError',
        'gtm.errorMessage': errorEventLabel,
        'numberOfErrors': errorEventValue
      });
    }
  });
</script>
```

How Do I Configure Tag Manager?

GTM

- Create tags for tracking transaction recording when the `transactionCompleted` event is present in the data layer
- Configure GTM tags to send data for unique transactions only; this is critical for accurate data tracking
- Configure a tag to send error data into Google Analytics as a custom event

Adobe Launch

- Configure a custom rule that will record transaction when `transactionCompleted` keyword in the data layer or trigger the rule with a direct call
- Use event serialization to prevent duplicate transactions
- Configure a rule to send error data into Adobe Analytics custom variable

All Tag Managers

- Use the same transaction trigger/logic for third party tags to ensure the transaction is forwarded only once

How Do I Test My Configuration?

- If you have Luminate test environment, use it first, otherwise use preview mode
- As of May 2021, GTM preview mode will execute code multiple times and does not provide an accurate event firing; publish your GTM container before testing
- In Launch, use the development code library for testing before deploying it to production
- Use Omnibug browser add-on to look at the analytics data in real time
- Verify data in the analytic reports
- Reconcile data between analytics and Luminate Online to determine the level of accuracy

Can I Collect User Data?

*“You want my metadata?
You’ll have to pry it from
my cold, dead hands...”*



© TimoElliott.com

Short Answer: You can only track constituent ids*
Longer Answer: It’s complicated. Explicit user consent may be required depending on where your organization operates and how you plan to use the collected data.

** Provided you were given consent if required by the law*

Disclaimer: We are not a legal council and the statements we make do not qualify as a legal advice. Please consult your organization's legal council about your organization's compliance requirements.

Best Practices for Tracking User Data

- Ask for user consent
- Send constituent id to the tag manager
- Store constituent id in a custom dimension or variable in your analytics data store
- Configure the analytics suite to unify user session
- Configure user reports in your analytics suite

```
[[?xx::x[[S1:cons_id]]x:::  
  <script>  
    if (hasUserConsented) {  
      dataLayer.push({ 'userId': '[[S1:cons_id]]' });  
    }  
  </script>  
]]
```



All Users
 100.00% Product Revenue

+ Add Segment

May 23, 2021 - May 31, 2021 ▼

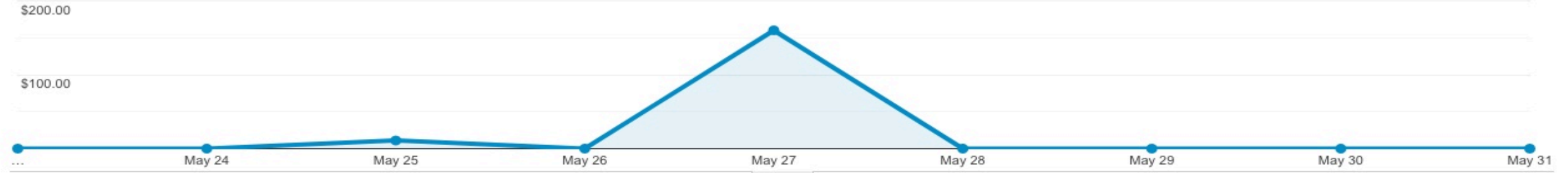
Explorer

Summary Shopping Behavior

Product Revenue ▼ vs. Select a metric

Day Week Month

Product Revenue



Primary Dimension: Product Product SKU Product Category (Enhanced Ecommerce) Product Brand

Secondary dimension: Product Category (Enhanced Ecommerce) ▼

advanced

| Product SKU ? | Product Category (Enhanced Ecommerce) ? | Sales Performance | | | | | | Shopping Behavior | |
|--|--|---|---|--|--|--|--|--|---|
| | | Product Revenue ? ↓ | Unique Purchases ? | Quantity ? | Avg. Price ? | Avg. QTY ? | Product Refund Amount ? | Cart-to-Detail Rate ? | Buy-to-Detail Rate ? |
| | | \$171.00 <small>% of Total: 100.00% (\$171.00)</small> | 7 <small>% of Total: 100.00% (7)</small> | 7 <small>% of Total: 100.00% (7)</small> | \$24.43 <small>Avg for View: \$24.43 (0.00%)</small> | 1.00 <small>Avg for View: 1.00 (0.00%)</small> | \$0.00 <small>% of Total: 0.00% (\$0.00)</small> | 0.00% <small>Avg for View: 0.00% (0.00%)</small> | 0.00% <small>Avg for View: 0.00% (0.00%)</small> |
| 1. donation-monthly-1981 | Donation | \$125.00 (73.10%) | 5 (71.43%) | 5 (71.43%) | \$25.00 | 1.00 | \$0.00 (0.00%) | 0.00% | 0.00% |
| 2. donation-one-time-1981 | Donation | \$46.00 (26.90%) | 2 (28.57%) | 2 (28.57%) | \$23.00 | 1.00 | \$0.00 (0.00%) | 0.00% | 0.00% |

Show rows: 10 ▼ Go to: 1 1 - 2 of 2 ◀ ▶

May 1, 2021 - May 31, 2021

All Users
100.00% Revenue

+ Add Segment

Explorer

Revenue vs. Select a metric

Day Week Month

Revenue



Primary Dimension: Transaction ID Date

Secondary dimension: User Id

Search advanced [Grid] [Clock] [List] [Filter] [Edit]

| Transaction ID | User Id | Revenue | Tax | Shipping | Refund Amount | Quantity |
|-----------------------------|---------|--|--|--|--|--|
| | | \$363.80 <small>% of Total: 100.00% (\$363.80)</small> | \$0.00 <small>% of Total: 0.00% (\$0.00)</small> | \$0.00 <small>% of Total: 0.00% (\$0.00)</small> | \$0.00 <small>% of Total: 0.00% (\$0.00)</small> | 13 <small>% of Total: 100.00% (13)</small> |
| 1. 3555-1601-1-18927-18846 | 1006629 | \$62.40 (17.15%) | \$0.00 (0.00%) | \$0.00 (0.00%) | \$0.00 (0.00%) | 1 (7.69%) |
| 2. 3555-1601-1-18926-18845 | 1006629 | \$36.40 (10.01%) | \$0.00 (0.00%) | \$0.00 (0.00%) | \$0.00 (0.00%) | 1 (7.69%) |
| 3. 3555-1601-1-18907-18826 | 1006629 | \$35.00 (9.62%) | \$0.00 (0.00%) | \$0.00 (0.00%) | \$0.00 (0.00%) | 1 (7.69%) |
| 4. 3555-1601-1-18928-18847 | 1006629 | \$35.00 (9.62%) | \$0.00 (0.00%) | \$0.00 (0.00%) | \$0.00 (0.00%) | 1 (7.69%) |
| 5. 3555-1601-1-19033-18959 | 1006629 | \$35.00 (9.62%) | \$0.00 (0.00%) | \$0.00 (0.00%) | \$0.00 (0.00%) | 1 (7.69%) |
| 6. 3555-1601-3-19034-18960 | 1006629 | \$35.00 (9.62%) | \$0.00 (0.00%) | \$0.00 (0.00%) | \$0.00 (0.00%) | 1 (7.69%) |
| 7. 3555-1601-3-19035-18961 | 1007408 | \$35.00 (9.62%) | \$0.00 (0.00%) | \$0.00 (0.00%) | \$0.00 (0.00%) | 1 (7.69%) |
| 8. 3555-1601-3-19036-18962 | 1007408 | \$35.00 (9.62%) | \$0.00 (0.00%) | \$0.00 (0.00%) | \$0.00 (0.00%) | 1 (7.69%) |
| 9. 3555-1601-3-19037-18963 | 1007408 | \$15.00 (4.12%) | \$0.00 (0.00%) | \$0.00 (0.00%) | \$0.00 (0.00%) | 1 (7.69%) |
| 10. 3555-1601-1-18908-18827 | 1006629 | \$13.00 (3.57%) | \$0.00 (0.00%) | \$0.00 (0.00%) | \$0.00 (0.00%) | 1 (7.69%) |

Product Revenue vs. [Select a metric](#)

Day Week Month



Primary Dimension: [Product](#) [Product SKU](#) [Product Category \(Enhanced Ecommerce\)](#) [Product Brand](#)

Secondary dimension

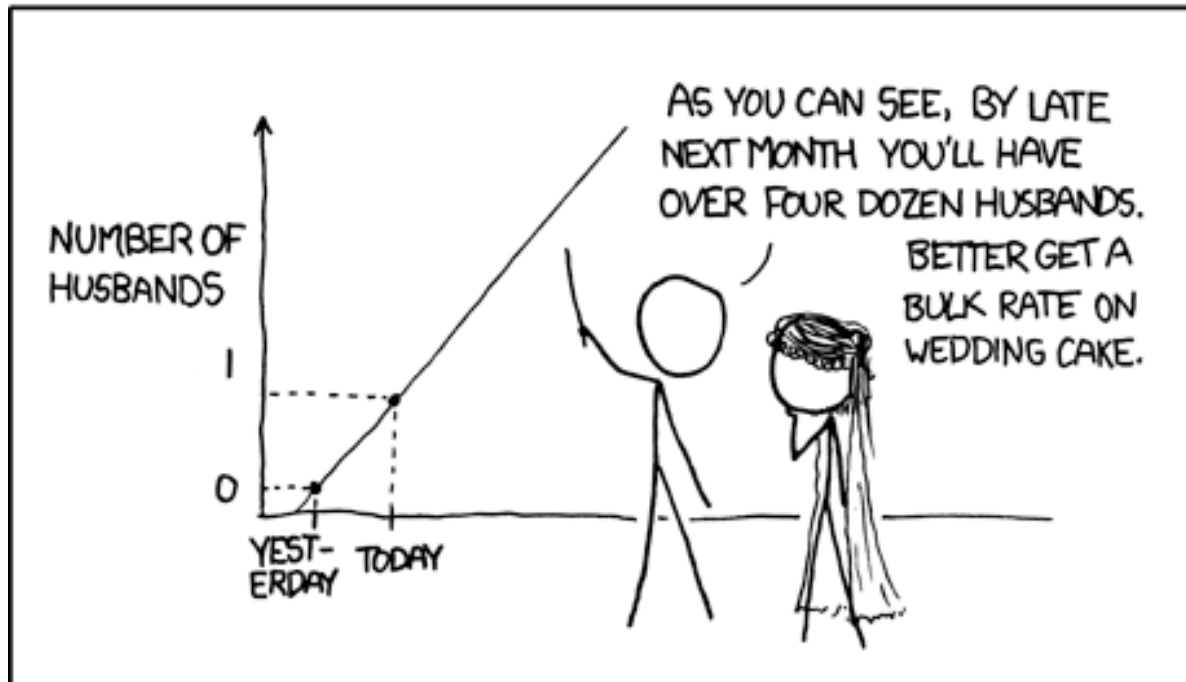
| Product SKU ? | Sales Performance | | | | | | Shopping Behavior | | |
|---|---|---|---|---|---|---|---|---|--|
| | Product Revenue ? ↓ | Unique Purchases ? | Quantity ? | Avg. Price ? | Avg. QTY ? | Product Refund Amount ? | Cart-to-Detail Rate ? | Buy-to-Detail Rate ? | |
| | \$96,450.58 <small>% of Total: 100.00% (\$96,450.58)</small> | 352 <small>% of Total: 100.00% (352)</small> | 355 <small>% of Total: 100.00% (355)</small> | \$271.69 <small>Avg for View: \$271.69 (0.00%)</small> | 1.01 <small>Avg for View: 1.01 (0.00%)</small> | \$0.00 <small>% of Total: 0.00% (\$0.00)</small> | 0.00% <small>Avg for View: 0.00% (0.00%)</small> | 0.00% <small>Avg for View: 0.00% (0.00%)</small> | |
| 1. donation-one-time-1640-no-fee-cover | \$56,388.48 (58.46%) | 138 (39.20%) | 138 (38.87%) | \$408.61 | 1.00 | \$0.00 (0.00%) | 0.00% | 0.00% | |
| 2. donation-one-time-1640-with-fee-cover | \$39,196.40 (40.64%) | 183 (51.99%) | 183 (51.55%) | \$214.19 | 1.00 | \$0.00 (0.00%) | 0.00% | 0.00% | |
| 3. donation-monthly-1640-no-fee-cover | \$275.00 (0.29%) | 9 (2.56%) | 9 (2.54%) | \$30.56 | 1.00 | \$0.00 (0.00%) | 0.00% | 0.00% | |
| 4. donation-monthly-1640-with-fee-cover | \$164.80 (0.17%) | 7 (1.99%) | 7 (1.97%) | \$23.54 | 1.00 | \$0.00 (0.00%) | 0.00% | 0.00% | |
| 5. donation-monthly-1661-with-fee-cover | \$133.90 (0.14%) | 5 (1.42%) | 5 (1.41%) | \$26.78 | 1.00 | \$0.00 (0.00%) | 0.00% | 0.00% | |
| 6. donation-monthly-1661-no-fee-cover | \$125.00 (0.13%) | 5 (1.42%) | 5 (1.41%) | \$25.00 | 1.00 | \$0.00 (0.00%) | 0.00% | 0.00% | |
| 7. ecomm-1221-15-year-anniversary-men-s-t-shirt | \$50.00 (0.05%) | 2 (0.57%) | 3 (0.85%) | \$16.67 | 1.50 | \$0.00 (0.00%) | 0.00% | 0.00% | |
| 8. ecomm-1221-men-s-hooded-sweatshirt | \$50.00 (0.05%) | 1 (0.28%) | 1 (0.28%) | \$50.00 | 1.00 | \$0.00 (0.00%) | 0.00% | 0.00% | |
| 9. ecomm-1221-men-s-port-authority-polo | \$40.00 (0.04%) | 1 (0.28%) | 1 (0.28%) | \$40.00 | 1.00 | \$0.00 (0.00%) | 0.00% | 0.00% | |
| 10. ecomm-1221-lapel-pin | \$27.00 (0.03%) | 1 (0.28%) | 3 (0.85%) | \$9.00 | 3.00 | \$0.00 (0.00%) | 0.00% | 0.00% | |

Making Sense of Data

As you start getting data review it but be careful not to make assumption or extrapolation on a limited data set.



MY HOBBY: EXTRAPOLATING



Additional Resources

- [GTM Enhanced Ecommerce Data Layer Format syntax](#)
- [GA4 GTM Data Layer Format](#)
- [#GTMTips: Prevent Repeat Transactions](#)
- [Adobe Launch Event Serialization](#)
- [Google Analytics User ID with GTM](#)
- [User Id configuration in GTM and Google Analytics](#)
- [Omnibug - browser debugging tool](#)





#bbdevdays

Thank you!