DAP Learning Series:
Tag Managers Part 2
Configuration Framework

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Agenda

1. Brief recap of Tag Manager Systems (TMS)
2. Datalayer Variables, Triggers and Tags
3. 3 path configuration framework and best practices on when to configure them.
4. Examples
5. Q & A
This hour is designed to be conceptual rather than technical.

Different tools will have different ways of implementing the processes I talk about today. Also, I am not a developer. If I have something incorrect, please tell me.
How to get value out of today's webinar

- Advanced topic
- Intermediate level in Google Analytics
- Some experience with TMS Data layer variables, triggers and tags
- Know your Goals & KPIs
This is a lot

If you're new to GA and TMS, you'll get more value out of learning the basics first with these webinars:

DAP 101

DAP 201
Why are we here today?

Using a TMS can feel like figuring out what came first - the chicken or the egg?

Figuring out “when” and “how” to implement a TMS is challenging, but half the battle.

Our goal is to help demystify this more for you!
What makes this challenging

How you implement a TMS is entirely specific to your website technology/CMS

- Different developers
- Different CMS platform (Wordpress, Drupal, etc.)
- Which means different code, elements, data layers, etc.
Let’s do a quick recap of Tag Managers

Tag Manager Systems (TMS) allow you to deploy scripts, trigger actions, and store data for use in a central place without touching page source-code.
Why use Tag Managers?

- Track interactions at scale
  - Example - PDF downloads
  - PDF download conversion rate

- Get really customized with what you want to track

- Lessen the burden on your development team
This is what a tag manager does...

Tag Manager Container

One piece of tag manager code in HTML

- Google Analytics
- jQuery
- Heatmapping tool
- A/B testing
- Feedback tool
- Plugin
- Ad tool
What’s required?

Knowing your:

- Website mission
- Goals
- KPIs
See our previous webinar
Tag Managers Part 1
If you want to know more about the data layer...

See DAP’s Part 1 of this webinar series
Let's unpack some terminology
Data layer

● Invisible layer into which your developer or CMS plugins, or Google Tag Manager can push, or reference information about different interactions, or to trigger some piece of data to be collected and sent to Google Analytics.

● Previous webinar: "The Data Layer is an invisible place you can send and temporarily store data that your tag manager* can use. The tag manager can send it to application(s) or use it to trigger other things" --Tim Lowden

● Not every website has a data layer

● Developers sometimes aren't familiar with it
Tag

- Tracking code you implement on your site
  - Google Analytics Event Tag
  - Facebook pixel tag
  - Google Ads Conversion Tag

- The “What” → What do you want TMS to do?
Trigger

- Rules you define for when your tags fire
  - For example:
    - Fire an event tag when a user clicks a button
    - Fire an event tag when a user scrolls down 75% of the page

- The "When" → When do you want to track some interaction using a tag?

- Triggers aren’t just used for sending data to Google Analytics!
Variables

- Information you can use in Tags or Triggers
- The "What" or "When" or the "How"
- Multipurpose - make a trigger more specific
How should we think about configuring a TMS?
How do we even start?

- What's the thought process of deciding how to get data into the data layer into Google Tag Manager and into GA?
- What is our mental model?
Mental Model

The Goal:

- Get the data in the data layer.
- Using either a **standard auto-event listener, custom auto event listener, developer/CMS plugin**
- Once you have the data available in the data layer, then you can configure TMS
- Then you read data with variables, define your trigger and then create a tag
- Examples: Link clicks, PDF downloads, Video plays, Login status, scroll depth, custom interactions.
Practical Framework - 3 paths, 5 steps

1. Auto Event Listener (AEL)
   Step 1: Is interaction tracked with auto event listener?
   Step 2: Enable 1 trigger to see if it is tracked.
   Step 3: Enable out of box variable
   Step 4: Configure your trigger
   Step 5: Configure your tag & link to trigger

2. Custom Auto Event Listener
   Step 1: Implement custom auto-event listener
   Step 2: Test interaction to see if custom auto-event listener appears in debug mode
   Step 3: Create data layer variable
   Step 4: Configure trigger for custom event
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3. Developer
   Step 1: Developer or plugin pushes data to data layer
   Step 2: Test data layer code in debug mode
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Difficulty Level
Path 1 - Auto Event Listener
What is an auto event listener?

- Functions (or set of functions) out of the box that are created to track certain interactions.
- When they spot that particular interaction, you can see it (and its data) in the debug mode of Google Tag Manager.
- **Enable triggers, to enable auto event listeners**
- What can you track? Automatically track events - PDFs, Outbound link clicks, etc.
Let’s look at our triggers in a TMS

Choose trigger type

Page View
- Page View
- DOM Ready
- Window Loaded

Click
- All Elements
- Just Links

User Engagement
- Element Visibility
- Form Submission
- Scroll Depth
- YouTube Video

Other
- Custom Event
- History Change
- JavaScript Error
- Timer
- Trigger Group
Today’s examples

Using GTM
Let's look at an example - Auto event listener

Let's say we want to track the number of PDF downloads of the document on

https://www.fedramp.gov/2021-03-16-Vulnerability-Scanning-doc/
Practical Framework - 3 paths, 5 steps

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Path 1, Step 1

Step 1: Is interaction tracked w/auto event listener in GTM debug mode?

We click the PDF link and don’t see link clicks enabled.

No, it does not fire in the data layer
Path 1, Step 2

Determine which out of the box auto event listener you need to enable to see the link click for the pdf in the data layer.
Preview in GTM debug mode to see if link click appears in data layer

The Federal Risk and Authorization Management Program (FedRAMP) is pleased to announce the release of the Vulnerability Scanning Requirements for Containers document. This document addresses FedRAMP compliance pertaining to the presence, architecture, and security considerations specific to vulnerability scanning for cloud systems using container technology. Prior to this release, the document was reviewed by Cloud Service Providers (CSPs) in a Technical Exchange Meeting and was provided to our stakeholders for public comment to ensure the guidance met CSPs' needs.
Path 1, Step 3

Enable out of box variables
Path 1, Step 3 cont.

Check variables in GTM debug mode data layer

Output of GTM-KS766QX

<table>
<thead>
<tr>
<th>Variable</th>
<th>Variable Type</th>
<th>Return Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>_event</td>
<td>Custom Event</td>
<td>string</td>
<td>'gtm.linkClick'</td>
</tr>
<tr>
<td>Click Classes</td>
<td>Data Layer Variable</td>
<td>string</td>
<td>'focus-within'</td>
</tr>
<tr>
<td>Click Element</td>
<td>Data Layer Variable</td>
<td>string</td>
<td>'<a href="https://www.fedramp.gov/assets/resources/documents/Vulnerability_Scanning_Requirements_for_Containers.pdf">https://www.fedramp.gov/assets/resources/documents/Vulnerability_Scanning_Requirements_for_Containers.pdf</a>'</td>
</tr>
<tr>
<td>Click ID</td>
<td>Data Layer Variable</td>
<td>string</td>
<td>_blank</td>
</tr>
<tr>
<td>Click Target</td>
<td>Data Layer Variable</td>
<td>string</td>
<td>'Vulnerability Scanning Requirements for Containers'</td>
</tr>
<tr>
<td>Click Text</td>
<td>Auto-Event Variable</td>
<td>string</td>
<td>'<a href="https://www.fedramp.gov/assets/resources/documents/Vulnerability_Scanning_Requirements_for_Containers.pdf">https://www.fedramp.gov/assets/resources/documents/Vulnerability_Scanning_Requirements_for_Containers.pdf</a>'</td>
</tr>
<tr>
<td>Click URL</td>
<td>Data Layer Variable</td>
<td>string</td>
<td>'<a href="https://www.fedramp.gov/assets/resources/documents/Vulnerability_Scanning_Requirements_for_Containers.pdf">https://www.fedramp.gov/assets/resources/documents/Vulnerability_Scanning_Requirements_for_Containers.pdf</a>'</td>
</tr>
</tbody>
</table>
Path 1, Step 4

Update your trigger

Trigger Configuration

- Trigger Type: Click - Just Links
- This trigger fires on: Some Link Clicks
- Fire this trigger when an Event occurs and all of these conditions are true:
  - Click URL: matches RegEx (ignore case): `\.pdf\|\.docx\|\.xls\|\.xlsx\|\.pptx\|`
Path 1, Step 5

Create a tag
Path 1, Step 5 cont.

Confirm tag fires in GTM debug mode

```javascript
dataLayer.push({event: 'gtm.linkClick', ...})
```

Output of GTM-TT3D6BG

Tags Fire

- GA Event - document link click
- Google Analytics: Universal Analytics - Succeeded
Path 2 - Custom Auto Event Listener
What is a custom auto event listener?

- Similar concept as auto event listener, but must be custom configured
- *Enable custom event listeners using Custom HTML tags*
- *Custom listener adds data about the interaction into the data layer. You access it with Data Layer Variables.*
- Example: Click play button on a Vimeo embedded video
Let's look at an example - Custom auto event listener

Let's say we want to track an embedded Vimeo video. This is similar to you a YouTube video, but it’s from a different company.
Let’s look at our auto event listeners in our TMS
Practical Framework - 3 paths, 5 steps

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Path 2, Step 1

Implement custom auto-event listener
Path 2, Step 1

Implement custom auto-event listener using custom html tag

```html
1. videoLabels[player].getAttribute('id') // id to label dictionary
2. 
3. // Listen for messages from the player
4. if (window.addEventListener) {
5. window.addEventListener('message', onMessageReceived, false);
6. }
7. else {
8. window.attachEvent('onmessage', onMessageReceived, false);
9. }
10. }
11. try{
12. 
13. function updateUrl(url, params, value) {
14. 
15. 
16.
```
Path 2, Step 2

Add a trigger to the custom html tag
Path 2, Step 2

Now let's test the custom auto event listener by using TMS's preview and debug mode
Path 2, Step 2

We see data layer info on vimeo in the data layer.
Path 2, Step 3

Now we have to create data layer variables for `eventAction` & `eventLabel` variables in the data layer.
Next, refresh GTM debug mode to check to see that variables are working. Both variables contain values.
Path 2, Step 4

Configure trigger for custom event for whenever a vimeo data layer push occurs on the page. Use the ‘video’ event in the data layer.
Path 2, Step 5

Configure your tag & link to trigger
Path 2, Step 5

Next we test the tag in debug mode in TMS
Path 3 - Datalayer
Practical Framework - 3 paths, 5 steps

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Difficulty Level
Send data to the data layer

```html
<script>

window.dataLayer = window.dataLayer || [];

window.dataLayer.push(
{
  "loginStatus":"Not Logged In",
  "customerTransactions":0,
  "accountStartDate":"2021-03-18 11:51:18.78"
});

</script>

Custom data about an interaction gets inserted here by your developer or plugin
Let’s look at an example - usps.com

Shopping Cart

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
<th>Qty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Flag Book of 20</td>
<td>$11.00</td>
<td>1</td>
<td>$11.00</td>
</tr>
</tbody>
</table>

**Availability:** Ships in 5 - 7 business days

Remove

Clear Shopping Cart
For more info on this approach

Refer to DAP’s Part 1 webinar
Takeaways

- Figuring out how to configure a TMS is challenging
- Use 3 path configuration framework
- Path 1 is the easiest and path of least resistance for most people
- Paths 2 & 3 require significantly more thought and development work
- Choose your path wisely
Questions?

As always, reach out to us with questions at dap@support.digitalgov.gov
Helpful Links

- Simo Ahava
- Analytics Mania