Case Study

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Internal search conversion rate optimization (Google Merchandise Store)

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Executive Summary:

This study uses real-world data from the GA4 Demo account to analyze internal search performance. By creating a custom dimension and funnel analysis, a high abandonment point in terms of high intent was identified, suggesting an opportunity for UX optimization on the results page.

**********División de los bloques e índice**********

Block I: Enhanced measurement activation and review

Why?

Because **enhanced measurement** automatically tracks several common events that are crucial for understanding our users behavior. This saves significant time and effort in the initial implementation.

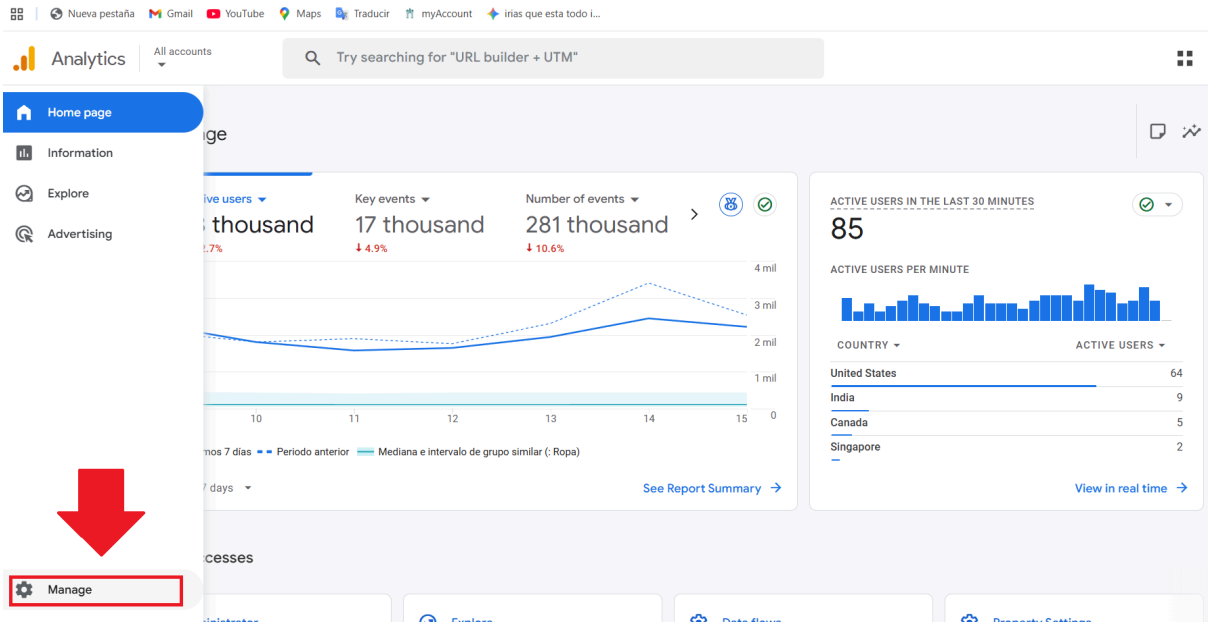
The main difference when enhanced measurement is **disabled** is the **absence of all the mentioned automatic events behind** (with the exception of page views, which are essential, and other events that GA4 automatically collects such as `first_visit` and `session_start`).

The events tracked by default (which can be individually disabled, except for page views) include:

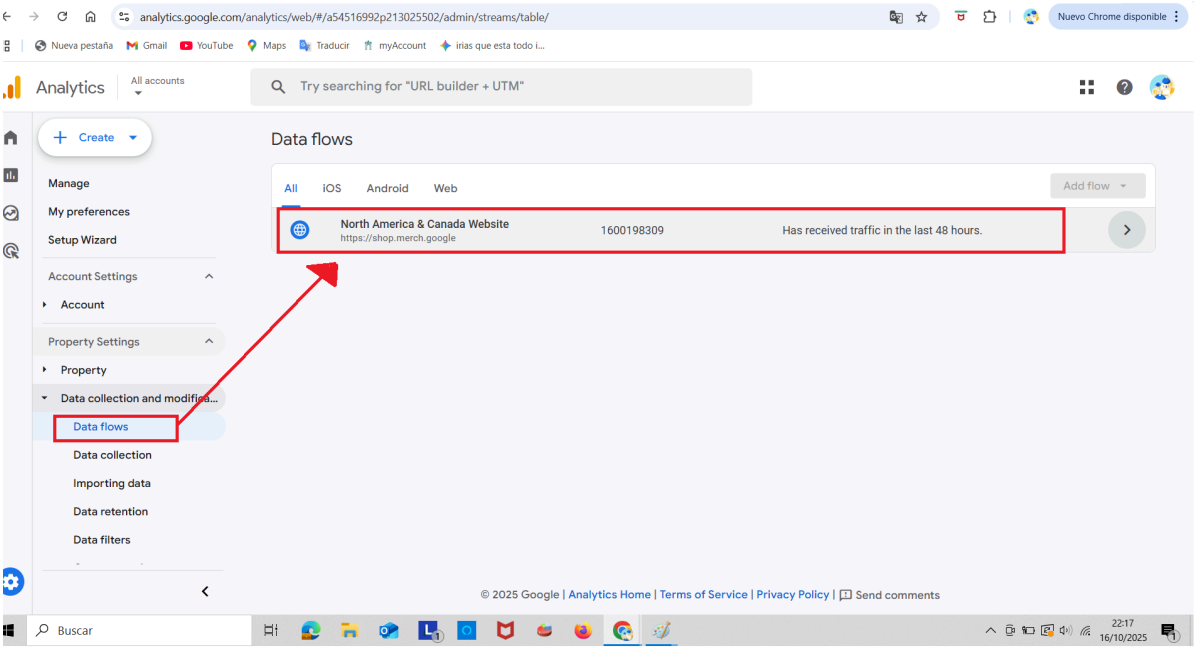
- Page views (`page_view`): Essential for basic traffic.
- Scrolls (`scroll`): Measures when a user scrolls to at least 90% of the page length.
- Outbound clicks (`click`): Records clicks on links that lead outside your domain.
- Site search (`view_search_results`): Captures internal search queries on your site.

- Video engagement (`video_start`, `video_progress`, `video_complete`): Tracks playback for embedded YouTube videos that use the JavaScript API.
- File downloads (`file_download`): Records clicks on links to common file types (documents, spreadsheets, executables, etc.).
- Form interactions (`form_start`, `form_submit`): Attempts to track basic form interactions.

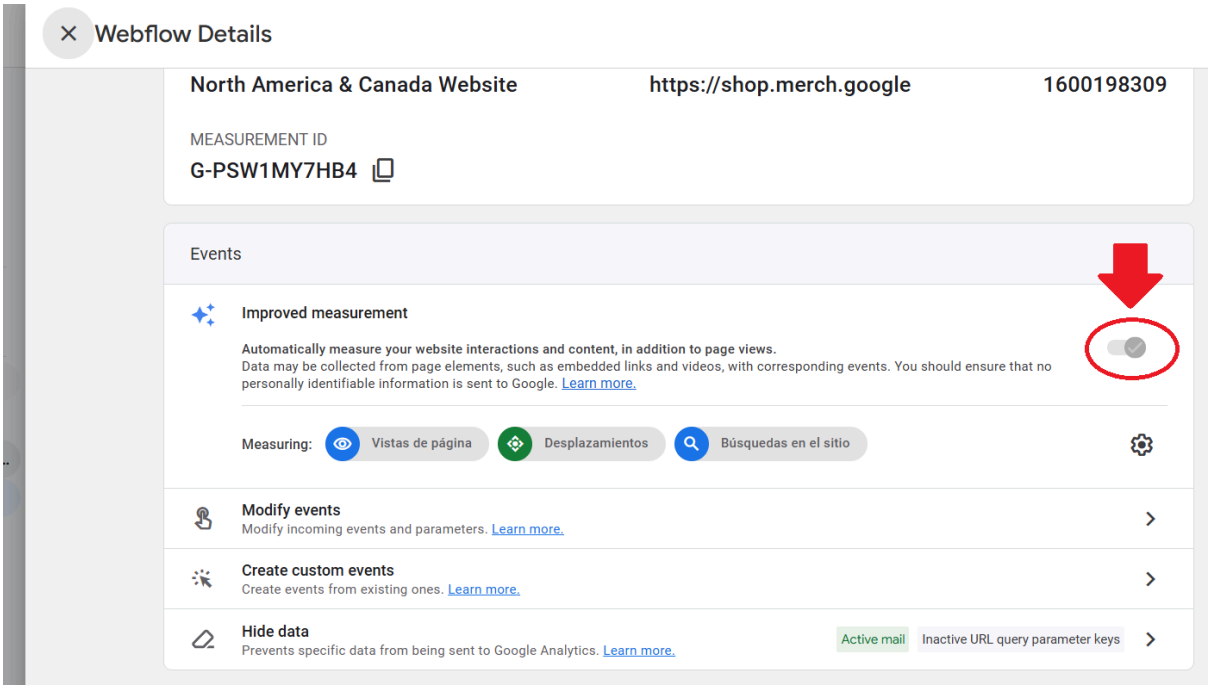
To activate it, firstly we click on manage;



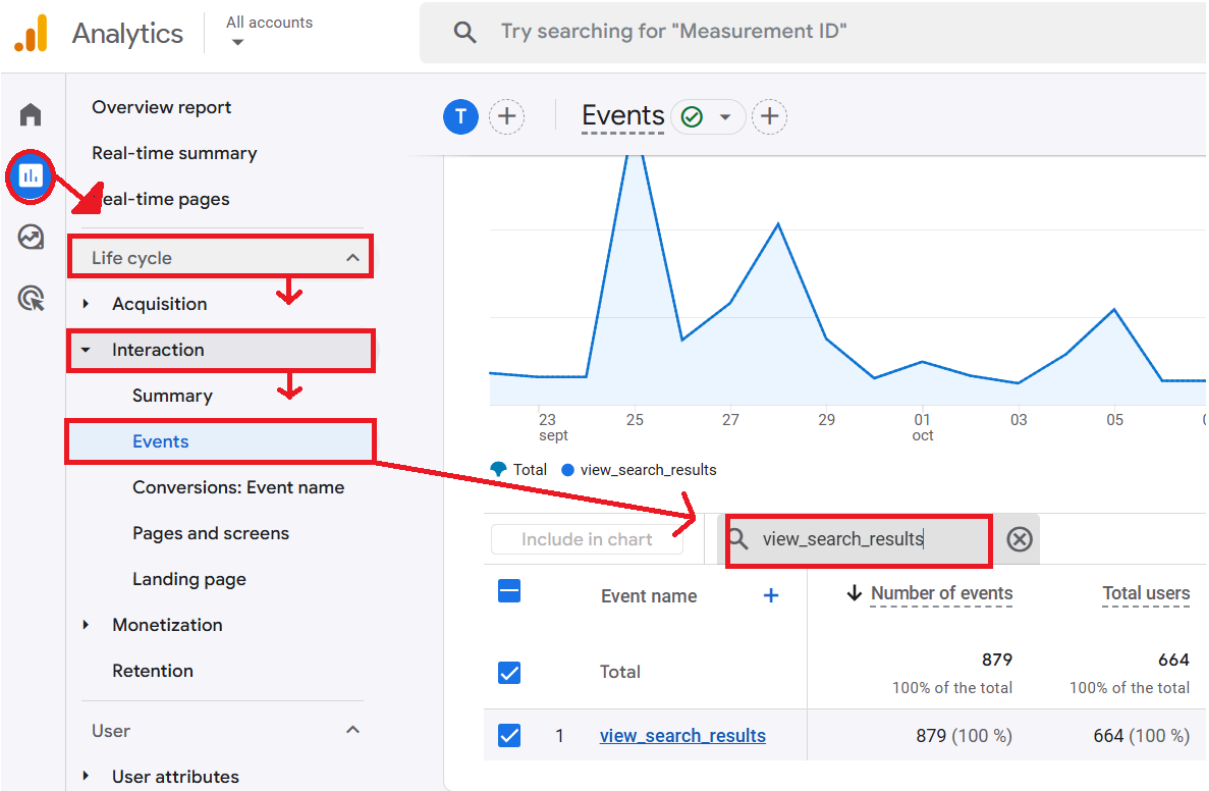
And once there, then we click on data flows to visualize all that are available. In this case in particular, since we use the Google Merchandise Store, we can choose the data flows they have from North America & Canada, but we can set up customized ones in our account.



The Webflow details will be shown and we will activate them by clicking in the toggle switch.



This action serves as the data collection validation. By checking the events report, we confirm that the improved measurement toggle is actively collecting the `view_search_results` event. This event is vital as it signifies high user intent, acting as the starting point for our funnel analysis.



Why focus on view_search_results ?

The choice of the **view_search_results** event is not arbitrary; it is a high-value strategic decision that frames this mockup as a **CRO (Conversion Rate Optimization)** exercise, rather than merely a configuration task. It is about identifying high-impact business opportunities.

1. The Logic of purchase intent (Intent-Driven Analysis)

On an e-commerce website (like the Google Merchandise Store), users can reach a product through various routes. The view_search_results event is the most powerful indicator of **high intent** that can be measured:

User Route	Purchase Intent	Associated Event
Browsing	Medium/Low (Curiosity)	**page_view**
External Search	Medium (General interest)	**session_start**
Internal Search	High (Specific need)	**view_search_results**

When a user types a query into the internal search bar (e.g., "coffee mug"), they send an **unequivocal signal** that they know exactly what they want and are actively seeking to purchase it right now.

That high intent is where the financial value lies. If the site fails to convert a user who has explicitly stated their need, the problem is **critical**, and solving it will have a direct impact on revenue.

2. Measuring the funnel gap

The entire project is based on creating a **conversion funnel** to measure the friction between the point of **maximum intent** and the **final purchase**.

1. **Step 1: Search** (view_search_results)
2. **Step 4: Purchase** (purchase)

If, for instance, the **completion rate** of this funnel for a specific term is only 3%, while the site's average is 10%, we have found a **"funnel gap"** that demands immediate attention. Analyzing view_search_results is the logical starting point to expose this gap.

3. Direct connection to the key parameter (`search_term`)

The view_search_results event is crucial because it automatically comes bundled with the vital **parameter** called `search_term`.

- The view_search_results event shows up that someone searched for something**.**
- The search_term parameter shows up what they searched for.

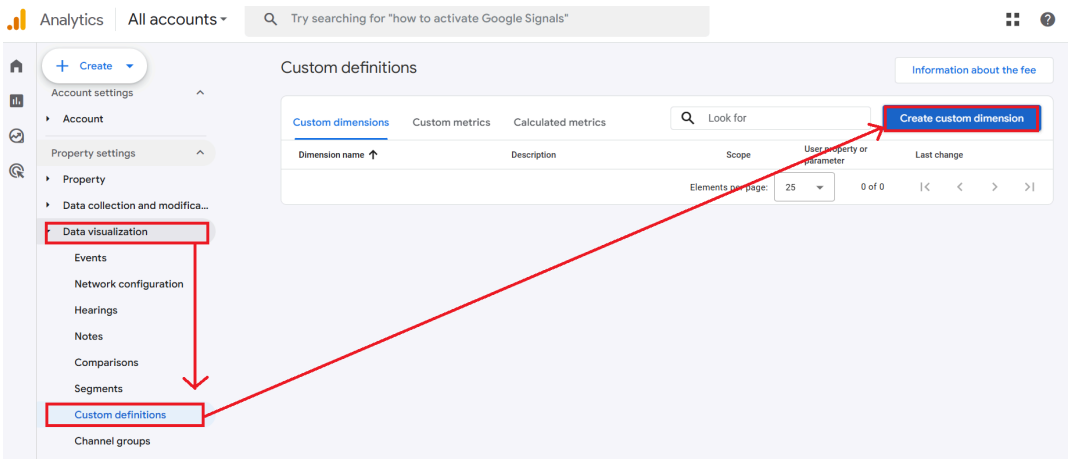
Without this parameter, the analysis is useless. By registering this parameter as a **custom dimension** we unlock detailed, term-by-term analysis.

Block II: Custom dimension registration

Objective: To formally register the search_term event parameter as an event-scoped custom dimension so it can be used as a breakdown in the funnel analysis (Block III).

1. Accessing custom definitions

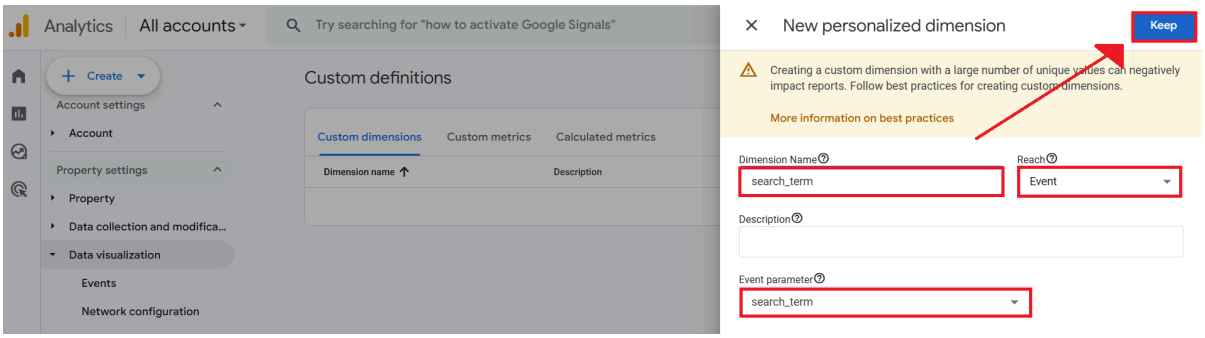
We will click the Admin icon in the bottom-left corner and then we will click on the red squares as it is shown in the picture:



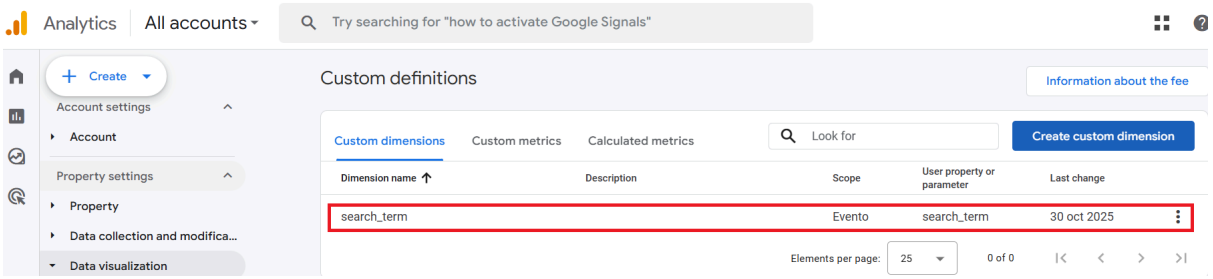
2. Creating the dimension

The goal of this block is to formally register the **search_term event** parameter as an Event-Scoped custom dimension. This is a mandatory step to unlock the term-specific analysis required for the funnel exploration in Block III.

Field	Value to Input	Strategic Justification
Dimension Name	search_term	**Clarity:** Use a descriptive name to quickly identify the field in the exploration builder.
Scope	Event	**Accuracy:** The `search_term` parameter only exists when the **view_search_results** event is fired. Setting the scope to 'event' ensures data linkage accuracy.
Event parameter	search_term	**Technical requirement:** This must be the exact, case-sensitive name of the parameter collected by the enhanced measurement feature.



And after clicking on “Keep” we will be able to see on the Custom definition the new dimension we created:



Conclusion for Block II:

By successfully registering as an **event-scoped custom dimension** named **search_term**, we transform the raw user intent signal into an **actionable analytical field**. This step is critical for segmenting the conversion funnel analysis in Block III, allowing us to pinpoint high and low-performing search terms."

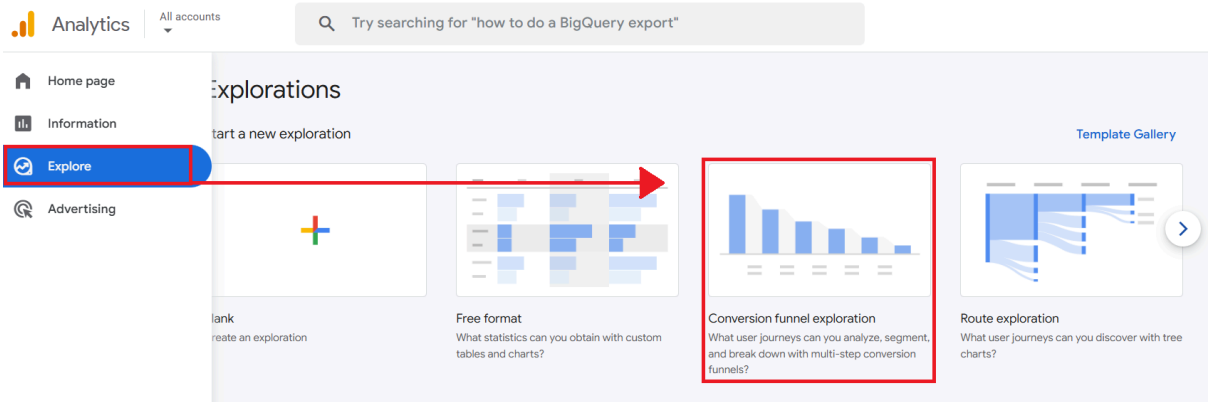
Block III: Creating the conversion funnel analysis

Objective: To quantify user drop-off from the high-intent search action, leveraging the **search_term** dimension to identify specific keywords responsible for the highest friction.

1. Funnel exploration creation

The funnel technique is used to visually quantify sequential drop-off rates between critical user actions, providing a clear map of conversion friction.

Firstly, we will navigate to the **Explore** section and select the **"funnel exploration"** template.



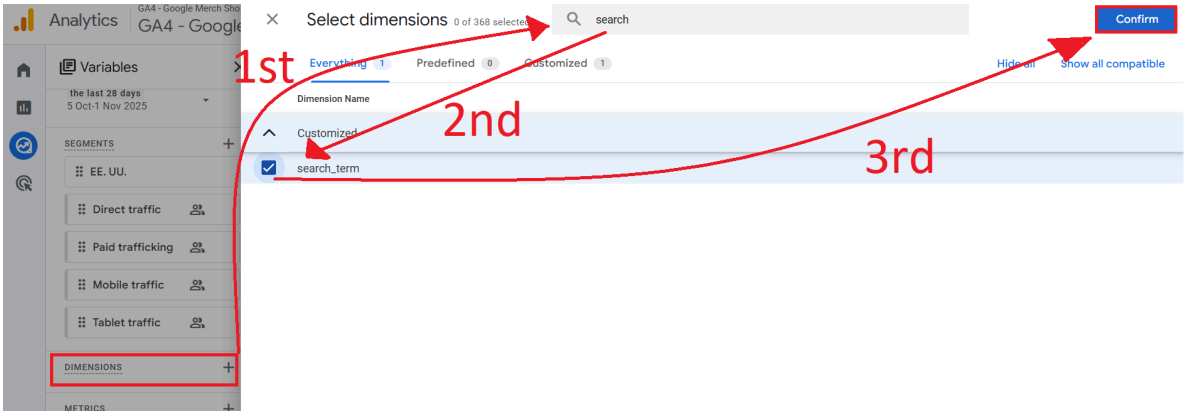
Steps Taken:

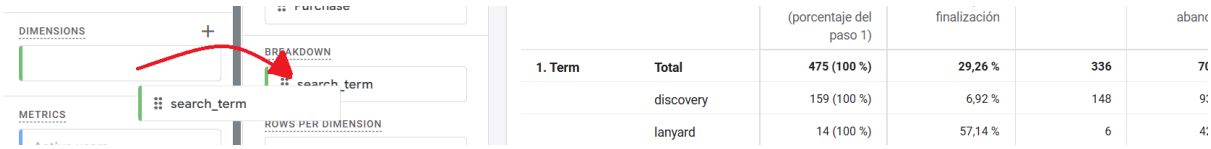
- The exploration was named **"Funnel1"**.
- The required metrics (**Items_purchased**, **add_to_carts**, **event_count**) and dimensions (**search_term**) were imported.

2. Defining steps and breakdown

The funnel was defined using 4 key steps that map the strategic path from search intent to final e-commerce conversion, and the **search_term** dimension was applied as a breakdown.

Action: The pencil icon was clicked next to **STEPS** to define the sequence, and the **search_term** dimension was **dragged an dropped** into the **BREAKDOWN** section.





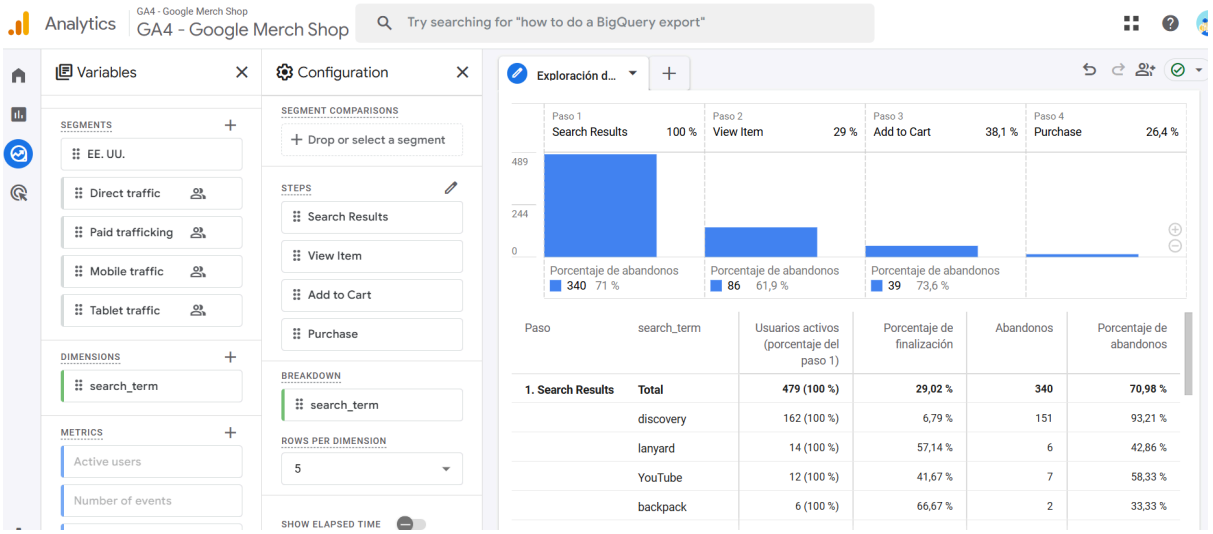
Funnel Definition

The funnel was defined using 4 key steps that map the strategic path from search intent to final e-commerce conversion:

Funnel Step	Nombre del Paso	Evento (Condición)	Justificación Estratégica
Step 1	**Search Initiation**	**view_search_results**	**High-Intent Signal.** The mandatory starting point for analyzing search-to-purchase conversion.
Step 2	**View Item**	**view_item**	The user successfully navigated from the search results to the specific product page.
Step 3	**Add To Cart**	**add_to_cart**	User committed to the purchase intention.
Step 4	**Purchase**	**purchase**	Final conversion, resulting in revenue generation.

3. Conclusion and key finding

Analysis Result: The resulting funnel exploration report isolates the drop-off rates for every single keyword searched.



Critical finding: The 'Discovery' funnel failure

The analysis reveals that the largest source of customer leakage originates from the search term **"discovery"**.

- **Quantitative Leakage:** This term shows a catastrophic **93.08% drop-off** between the Search Initiation (view_search_results) and the subsequent step View Item or Add To Cart.
- **Lost Intent:** Out of 159 users who searched for "**discovery**," only **6.92%** (11 users) managed to reach the **"Add To Cart"** stage, indicating that for most users, the search results failed to satisfy their high intent.
- **Comparison:** This failure rate is significantly higher than other terms like "**lanyard**" (**42.86% drop-off**) or "**backpack**" (**33.33% drop-off**), prioritizing "**discovery**" as the most urgent CRO issue.

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4. Strategic recommendations (Action plan) ?????????

The analysis clearly proves the existence of a severe **funnel gap** caused by poor search engine performance for specific, high-volume terms. The following actions are recommended:

A. Immediate Technical Audit (Highest priority)

- **Inventory Check:** Immediately investigate the current stock status of products categorized under "discovery." The high drop-off suggests that the search engine may be returning **out-of-stock items** or pages that result in a **"No results found"** page, even if the primary event view_search_results is fired.
- **Search Relevance Tuning:** Audit the discovery keyword mapping in the store's internal search platform. Ensure that search results accurately reflect the user's intent, potentially requiring a manual override to surface the most popular or highest-converting "discovery" items.

B. CRO and user experience (UX) recommendations

- **Filtering enhancement:** The high drop-off suggests users may not be able to refine their search. Implement or improve dynamic filtering options (e.g., filter by price, color, or product type) immediately on the search results page to help users move from the $\text{view\_search\_results}$ step to the view_item step.
- **Zero-Result Strategy:** Develop a robust strategy for searches that return zero results. Instead of simply showing a blank screen (which often causes immediate abandonment), suggest related categories or popular trending items to retain the user and guide them toward the View Item step.

Conclusion summary:

> The analysis successfully identified the most critical point of friction: the 'discovery' search term. Fixing this single keyword's performance has the potential to recapture over 93% of highly-intended traffic currently being lost, providing the highest ROI for the upcoming CRO quarter.