

Metrics



shift^{IT}

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-  **Objective:** Introduction to key metrics and their role in digital marketing analysis.
-  **Why is this important?**
 - Understanding website traffic and user behavior is essential for optimizing digital performance.
 - "You can't improve what you don't measure" – data-driven decisions help businesses grow.
 - Analytics tools are more than just counters; they provide deep insights into visitor behavior.
-  **Additional Resources:**
 - Google Analytics Official Guide: [Google Analytics Support](#)

How many marketing tracking tags can you find on the lolaliza.com homepage?



Source : lolaliza.com

Slide 2-4: Tracking Tags on Websites

- 📌 **Objective:** Identifying marketing tracking tags on different websites.
- ❖ **Why is this important?**
 - Websites use multiple tracking tags to collect user data for marketing and analytics.
 - Understanding how many and which tags are present helps assess tracking intensity.
 - Some companies use minimal tracking, while others have extensive data collection strategies.
- 🔗 **Additional Resources:**
 - Chrome Extension to check tracking: [Ghostery](#)
 - Online tag scanners: [Tag Inspector](#)

How many marketing tracking tags can you find on the <https://www.reuters.com/> homepage?



Reuters World Business Markets Sustainability Legal Breakingviews Technology Investigations More My News Sign In Subscribe - €1/week

• LIVE Trump tariffs: China, EU and Canada vow countermeasures

X

Europe

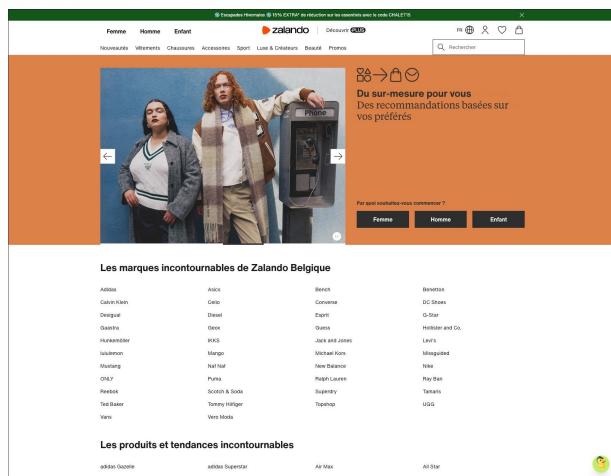
Africa Americas Asia Pacific China Europe India Israel and Hamas at War Japan Middle East Ukraine and Russia at War United Kingdom
United States Reuters NEXT



Source : Reuters

Take any website after first verifying that there are numerous trackers installed.

How many tracking tags can you find on the Zalando homepage?



Source : Zalando

Take any website after first verifying that there are numerous trackers installed.

Tracking solutions



Google
Analytics

Bing



OBJECTIVE
PLATFORM



CRITEO

BID
SWITCH

hotjar



Google Ads

Zemanta™
an Outbrain Company

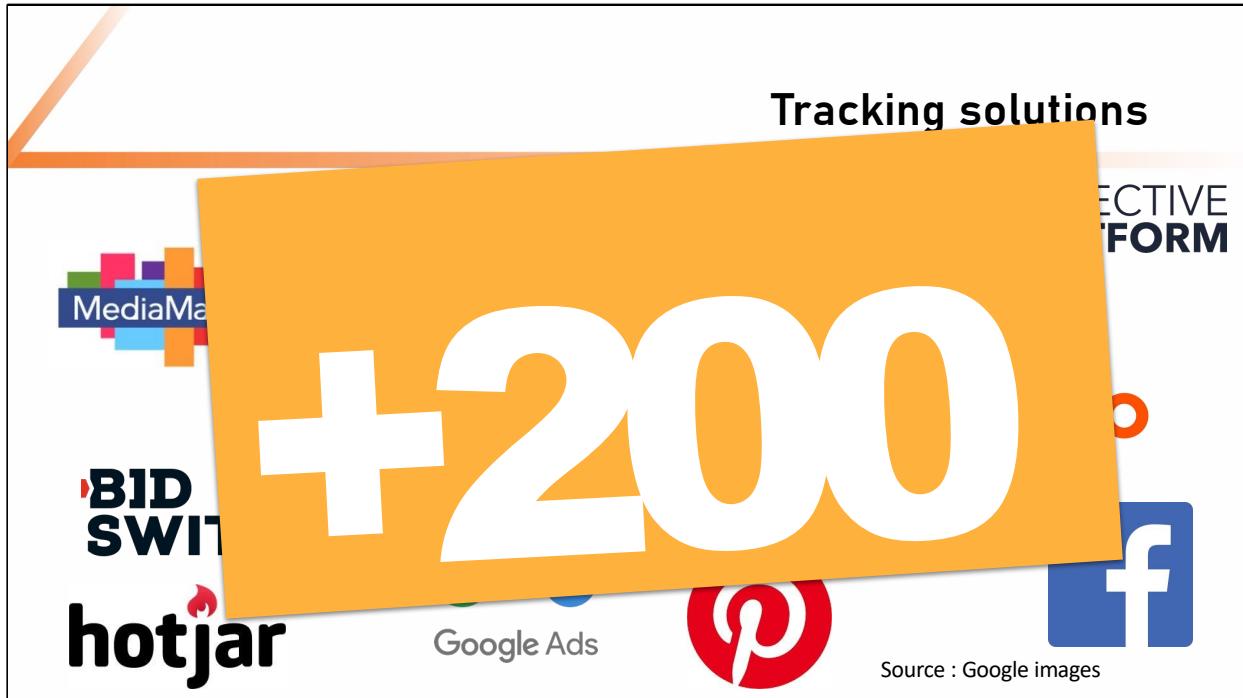


MOAT
y ORACLE DATA CLOUD



Source : Google images

There are many tracking solutions available.



In 2024, there were more than 200

Analytics are tools for measuring and analyzing website traffic

They're not just a counter for visitor numbers, but truly powerful marketing tools for analyzing and understanding what visitors do on a site.

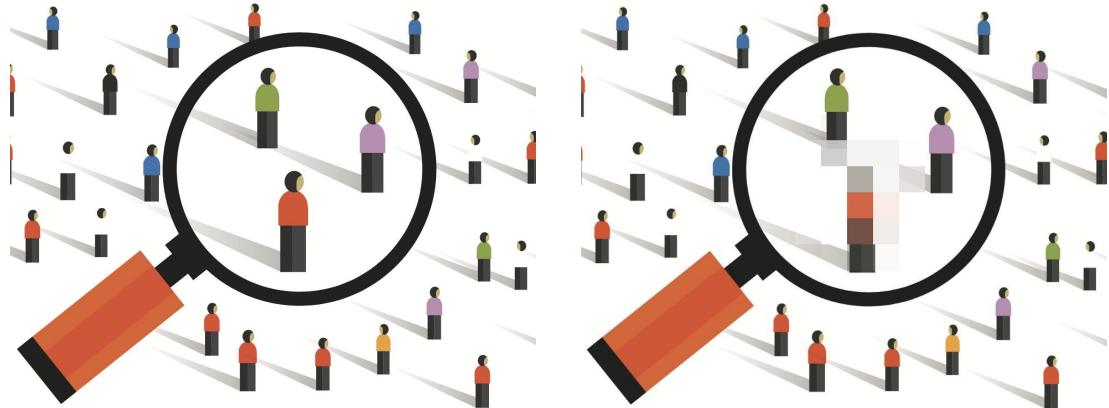
1. YOU CAN'T IMPROVE WHAT YOU DON'T MEASURE
2. GOOD DATA IS THE FOUNDATION FOR MAKING SMART DECISIONS.
3. DATA WITHOUT CONTEXT IS MEANINGLESS...

Tracking tools are a strategic lever in marketing and user experience.

Analytics tools present trends

- These are not 100% accurate tools!
- Tracking 100% of data is impossible (Data Integrity problem)
 - User leaves page too soon
 - The user uses AdBlockers
 - User blocks JS and code is not integrated in no script
 - There is a JS error in the page
 - Google Consent is enabled and the user has not accepted or refused cookies (analytics storage or Ad storage)
 - Sampling or thresholding
-  **Objective:** Understanding why analytics data may not be 100% accurate.
-  **Common Data Gaps:**
 - Users leave the page before tracking is triggered.
 - Ad blockers prevent analytics scripts from loading.
 - Users disable JavaScript or refuse cookie consent.
 - Sampling and thresholding limit data collection in large datasets.
-  **Why is this important?**
 - Helps analysts recognize discrepancies and adjust strategies accordingly.
 - Emphasizes the need for multi-source data validation.

Sampling vs Threshold



Source : Google images

Sampling is a method that allows Google Analytics to generate reports by examining only a representative portion of the data, rather than querying the entire dataset. This approach allows Google to be efficient in compute costs, but this can lead to situations where it is provided an approximate value instead of the exact value.

Data Thresholding allows Google to withhold data in situations where the algorithm detects a potential risk of identifying a real-world person by their demographics or interests, such as age, gender, location, etc. Data threshold is meant to protect user privacy. In Google Analytics 4 (GA4), standard reports do not **generally** face data thresholds. However, for specific reports, especially those involving sensitive user demographics like age and gender, GA4 does apply data thresholds.

Google Analytics is the Leader Analytics

- 52% Sites around the world are tracked with Google Analytic
 - Facebook > 18
 - Hotjar > 3% of sales
 - Yandex > 3% of sales
 - Matombo > 3% of sales
- Is it really free ?
 - Ex: From : (for 25 million vents per month), 50.000€ PER YEAR!... & you have to go through an agency, which will also charge a fee
 - It is estimated that 10% of budgets should be devoted to monitoring the actions carried out and learning from them.
 - IT'S NO LONGER A Hobby, IT'S A BUSINESS

*When things are free and too good to be true, it's usually because, in the end, you're the product... It's sometimes better to find out about the different terms and conditions of a free solution, and especially about data sharing. In your Analytics account, you will find a checkbox (often checked without reading) that states the following:

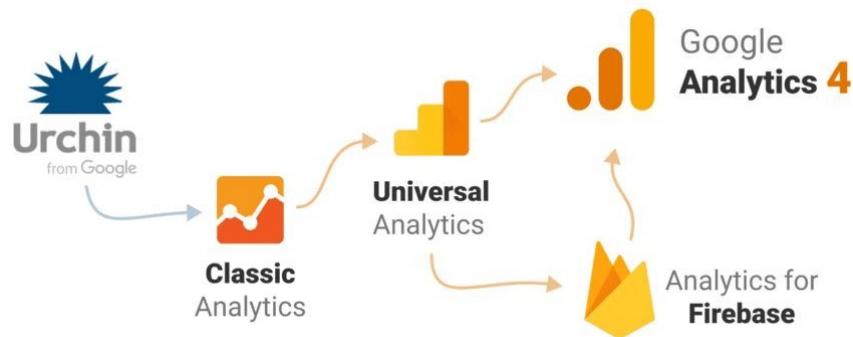
- You share your Google Analytics data with us to help us improve our products and services. Share your Google Analytics data with Google to help us improve our products and services. If you enable this setting, Google Analytics will be able to provide the best possible intelligence and insight services, improve spam detection services that benefit all products and users, and offer enhanced reporting on demographics and interests (if Google signals are enabled). products and users, and offer enhanced reporting on demographics and interests (if Google Signals are enabled). If you disable this option, data may still be transmitted to other Google products associated with your property. To view or modify your settings, go to the product association section of each property.

◆ Key Insights:

- Google Analytics dominates with **52%** market share.

- Facebook, Hotjar, and Yandex have niche usage.
- Some advanced analytics tools require paid subscriptions and agency support.
- **◆ Why is this important?**
- Businesses must choose analytics tools based on needs and budget.
- Paid tools offer more customization but require investment.

Google Analytics history



Source : Google images

Today, we're talking about Google Analytics 4. It's the latest version of analytics offered by Google. It's a blend between the classic universal analytics and Firebase analytics. Now, everything is interconnected within one tool. This tool also replaces Google's Data Manager.

Google Analytics history



UTM Urchin
Tracking Module

UTM_SOURCE
UTM_MEDIUM
UTM_CAMPAIGN
UTM_TERM
UTM_CONTENT

Source : Google images

- **Key Takeaways:**
- **UTM (Urchin Tracking Module)** allows businesses to track marketing campaign performance.
- Different UTM parameters include:
 - `utm_source`: Identifies traffic origin (e.g., Google, Facebook).
 - `utm_medium`: Specifies the type of traffic (e.g., email, social, CPC).
 - `utm_campaign`: Tracks specific marketing campaigns.
- GA has evolved significantly, moving towards **Google Analytics 4 (GA4)**.
- **◆ Why is this important?**
- Helps marketers analyze ROI from different traffic sources.
- Provides deeper insights into campaign effectiveness.

GA installation



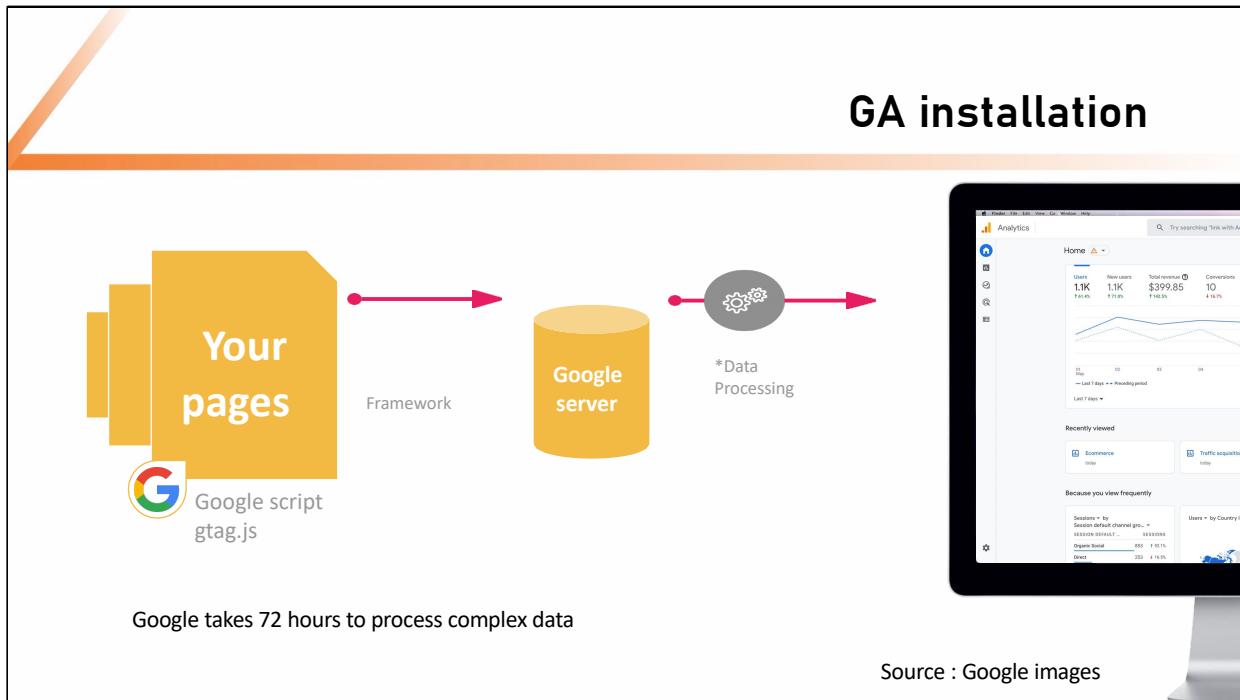
```
<!-- Google tag (gtag.js) -->
```

```
<script async  
src="https://www.googletagmanager.co  
m/gtag/js?id=G-ABC123XYZ"></script>
```

```
<script>
```

```
window.dataLayer = window.dataLayer  
|| []; function  
gtag(){dataLayer.push(arguments);}  
gtag('js', new Date());
```

- **Key Takeaways:**
- GA4 script (gtag.js) must be added to web pages.
 - Data is processed with a **72-hour delay** for complex insights.
 - GA4 focuses on **event-based tracking** rather than session-based.
- **◆ Why is this important?**
 - Understanding implementation helps ensure accurate data collection.
 - Event-driven analytics provide more granular user behavior insights.
- **🔗 Additional Resources:**
 - [GA4 Measurement Protocol](#)



The installation of Google Analytics is done through a script added to your pages, which is then processed by Google's servers. After that, the data is analyzed and available on a dashboard.

Google Analytics 4 protocol

https://analytics.google.com/g/collect?v=2&tid=G-ABC123XYZ>m=2oe540&p=870956342&z=ccd.tbB&gcs=G111&cid=1495324351.1650350633&ul=en&sr=1728x1117&s=3&uid=70&sid=1652021896&sct=23&seg=1&dr=https%3a%2f%2fgoogle.com&dl=https%3A%2F%2Fdomaine.com%2Ffr%2F&dt=titre%20de%20la%20page&en=page_view&up.crm_id=70&up.user_id=70

Here's an example of the Google Analytics protocol. The interesting part isn't the link itself, but seeing what makes up the link, with various elements that we'll discuss later.

Google Analytics 4 protocol

- | | |
|---|--|
| <ul style="list-style-type: none">• sid=1652077808• sct=25• seg=1• dl=https://domaine.com/fr• dr=https://www.google.com• dt=Page title• en=page_view• _ss=1• up.crm_id=70• up.user_id=70 | <ul style="list-style-type: none">• Session Id• Session Count• Session Engagement (1=true)• Document Location• Document Referrer• Document Title• Event Name• Session Start• User Property• User Property |
|---|--|

Here is the breakdown of the protocol elements. On the left column, we have the elements, and on the right column, we have the explanation of each element.

Over 120 possible parameters

- All Google Analytics information is stored in a cookie on your computer (browser).
- On YOUR domain name...
- ~~or on the doubleclick domain name (e.g. remarketing)~~



Source : Google images

These elements or parameters allow for a hundred or more combinations.

GDPR compliance

What is GDPR?

- The General Data Protection Regulation (GDPR) is an EU law effective since May 2018.
- It aims to protect personal data and privacy of EU citizens.
- Key principles include: data minimization, explicit user consent, transparency, and the right to be forgotten.
- Applies to any organization processing EU user data, regardless of location.

Google Analytics & GDPR Compliance Issues

- Data transfers to the US: GA may send user data to US servers, where EU-level protection does not apply.
- Use of unique identifiers and IP tracking can still be considered personal data under GDPR.
- Consent requirements: GA requires prior, explicit user consent to be lawful.
- EU regulators (e.g. CNIL) have ruled GA usage non-compliant without strong safeguards.

“GDPR is an EU regulation that protects personal data and requires explicit user consent before collecting or processing it.

The issue with Google Analytics is mainly about data being sent to the US and the use of identifiers that can be considered personal.

Without proper safeguards and clear consent, using GA can be seen as non-compliant by EU regulators like the CNIL.”

Personal identifying information

- Any information that could identify a single person, even if encrypted, cannot be imported into Google Analytics. For example : 122.195.25.144
- The GDPR requires Prior consent

This explains what personal data is, like an IP address, and what the GDPR regulation entails.

What is consent?

The consent you are required to provide for the insertion or reading of "non-functional" cookies and other similar technologies must, in order to be valid, meet the general conditions of lawfulness of consent as set out in the RGPD.

- Your consent must be obtained prior to the insertion or reading of cookies.
- Your consent must be informed
- Your consent is valid only if you can exercise a real choice
- Your consent must be specific
- You must be able to withdraw your consent

Here, I explain what consent means in the context of GDPR legislation.

Pros and Cons

- Pros

- You comply with GDPR laws
- Users are protected

- Cons : If users refuse,

- you have no tracking info
- No traffic sources
- No links to paid ads
- No conversion tracking
- You can't compare periods easily

Here, we explain the implications of explicit consent on the quality of tracked data.

Take a random site and check if it's GDPR compliant for your EU country



- 15' + Debrief
- Use Chrome
- Addon : <https://chromewebstore.google.com/detail/analytics-debugger/ilnpmccnfdjdjjikgkefkcegefikecdc>
- Addon :
<https://chromewebstore.google.com/detail/editthiscookie-v3/ojfebgpkimhlhcblbalbfjblapadhbol>

The goal of the exercise is to spend 15 minutes using two Chrome add-ons to check if a website complies with European legislation.

Consent: technical considerations

- Google Consent Status (G1xx)

Value	Meaning
-------	---------

G100	Consent for both ad_storage and analytics_storage is denied.
------	--

G110	Consent is granted for ad_storage and denied for analytics_storage.
------	---

G101	Consent is denied for ad_storage and granted for analytics_storage.
------	---

G111	Consent for both ad_storage and analytics_storage is granted.
------	---

G1--	The site did not require consent for ad_storage or analytics_storage.
------	---

As part of the Google Analytics protocol, this explains the technical aspects of consent and its impact on tracking.

Let's Practice in GA4 Demo accounts

Access to Google GA4 demo account



<https://support.google.com/analytics/answer/10993011?hl=en>

For

Google Merch Shop <https://shop.merch.google/>

Here's an introduction to Google's demo case, which is available to everyone and involves the analytics of Google's online store.

Demo

In the Google DEMO account (GA4), get the following information (about September 2024):

- How many new users are there this month?
- The number of tablet purchases?
- How many sessions were generated by Organic Search?
- Which product was the most popular?
- What is the URL of the first page of the session?
- Most popular (after the homepage)?
- Looking at the traffic, what's the most popular source of traffic?
- What is the revenue of the product with the best add-to-cart rate per view?
- Which browser (and version) has a problematic engagement rate?

Learners are asked to find the various metrics listed on the slide in the demo Google account.

Setting goals

- 100% of events can become conversions
- MIC = Micro-conversions are all actions by your users that lead to a macro-conversion.
- MAC = Macro conversions are all actions taken by your users that earn you a profit.

Here we introduce the concept of goals in Google Analytics.

Events in GA4 specific to ecommerce

Event	Trigger condition
<code>click</code>	Every time a user clicks on a link to a domain other than the current one.
<code>file_download</code>	When a user clicks on a link to a file
<code>page_view</code>	Each time the page loads or the active site changes the state of the browsing history.
<code>scroll</code>	The first time a user accesses the bottom of each page, i.e. when a vertical depth of 90% becomes visible.
<code>session_start</code>	When a user interacts with the application or website.
<code>user_engagement</code>	When the application is running in the foreground or the web page is active for at least one second.
<code>video_complete</code>	When the video ends.
<code>video_progress</code>	When video playback exceeds 10%, 25%, 50% and 75%.
<code>video_start</code>	When video playback starts.
<code>view_search_results</code>	Each time a user performs a search on the site (this action is indicated by the presence of a URL query parameter).

- **Key Takeaways:**
 - Events like `add_to_cart`, `purchase`, and `refund` provide deep insights.
 - GA4 allows up to **500 custom events** and **50 event dimensions**.
- **◆ Why is this important?**
 - Helps track user behavior beyond simple page views.
 - Businesses can measure and optimize conversion rates effectively.
- **🔗 Additional Resources:**
 - GA4 Event Reference

Events in GA4 specific to ecommerce

Event	Trigger condition
<u>generate_lead</u>	A user sends a form or a request for information.
<u>view_item_list</u>	A user consults a list of items/offers.
<u>view_item</u>	A user consults an element.
<u>view_promotion</u>	A promotion is presented to a user.
<u>select_item</u>	A user selects an item from a list.
<u>select_promotion</u>	A user selects a promotion.
<u>add_to_wishlist</u>	A user adds items to a wish list.
<u>add_to_cart</u> <u>view_cart</u>	A user adds items to the shopping cart.
<u>remove_from_cart</u>	A user consults his basket.
<u>begin_checkout</u>	A user deletes items from the basket.
<u>add_payment_info</u>	A user starts the settlement process.
<u>add_shipping_info</u>	A user sends his payment information. A user sends his delivery information.
<u>purchase</u>	A user makes a purchase.
<u>refund</u>	A refund is issued.

List of e-commerce-specific events in Google Analytics

Events in GA4 specific to ecommerce

Event	Trigger condition
<u>ad_impression</u>	A user sees a print ad. (Application only)
<u>earn_virtual_currency</u>	A user earns virtual currency (coins, credits, tokens, etc.).
<u>join_group</u>	A user joins a group (to assess its popularity).
<u>login</u>	A user logs in.
<u>purchase</u>	A user makes a purchase.
<u>refund</u>	A user receives a refund.
<u>search</u>	A user searches your content.
<u>select_content</u>	A user selects content.
<u>share</u>	A user shares content.
<u>sign_up</u>	A user registers (to evaluate the popularity of each registration method).
<u>spend_virtual_currency</u>	A user spends virtual currency (coins, credits, tokens, etc.).
<u>tutorial_begin</u>	A user starts a tutorial.
<u>tutorial_complete</u>	A user follows an entire tutorial.

Continuation of the list.

Events in GA4 specific to games

	Trigger condition
earn_virtual	A user earns virtual currency (coins, credits, tokens, etc.).
_currency_event	
join_group	A user joins a group to assess its popularity.
level_end	A user completes a level in the game.
level_start	A user starts a new level in the game.
level_up	A user moves up to the next level in the game.
post_score	A user publishes his score.
select_content	A user selects content.
spend_virtual_currency	A user spends virtual currency (coins, credits, tokens, etc.).
tutorial_begin	A user starts a tutorial.
tutorial_complete	A user follows an entire tutorial.
unlock_achievement	A user unlocks a success.

List of game-specific events in Google Analytics.

500 custom events

- 25 parameters per event
- 25 User Properties per property
- DIMENSIONS are the visitor (or his visit)
- METRICS account for the visitor's actions.
- Custom Dim & Metrics
 - 50 customized event dimensions
 - 50 custom metrics per property
 - 25 customized, user-oriented dimensions

https://support.google.com/analytics/table/13948007?visit_id=638753942898755878-2040512900&rd=2

Explanations for creating custom events using different parameters and properties.
You can show the link below to learners if there's interest.

Traffic sources

- Direct traffic is by default...
you can't do anything with it...



Source : Google images

- **◆ Key Takeaways:**
 - Direct traffic is **untrackable** by default.
 - UTM parameters can **override traffic source** for campaign tracking.
 - Attribution models (last-click, first-click, data-driven) affect reporting.
- **◆ Why is this important?**
 - Businesses must use the right **attribution model** for accurate ROI analysis.
- **🔗 Additional Resources:**
 - Google Attribution Models

Custom Source (campaigns)

- When you want to force a source on a url (a click) you can use the URL constructor.
- It automatically adds UTM parameters to the final url. These parameters overwrite the actual source.

The screenshot shows the 'Campaign URL Builder' tool from Google Analytics. The interface includes a header with the Google Analytics logo and 'Demos & Tools'. Below the header, the title 'Campaign URL Builder' is displayed. A descriptive text explains that the tool allows users to easily add campaign parameters to URLs to track custom campaigns in Google Analytics. A form is provided for entering website URL and campaign information. Required fields are marked with an asterisk (*). The fields include:

- Website URL**: A text input field for the full website URL (e.g., <https://www.example.com>).
- Campaign Source**: A text input field for the referrer (e.g., google, newsletter).
- Campaign Medium**: A text input field for marketing medium (e.g., cpc, banner, email).
- Campaign Name**: A text input field for product, promo code, or slogan (e.g., spring_sale).
- Campaign Term**: A text input field for identifying paid keywords.
- Campaign Content**: A text input field for additional campaign details.

Below the form, there is a note: "Fill out the required fields (marked with *) in the form below, and once complete the full campaign URL will be generated for you. Note: the generated URL is automatically updated as you make changes."

You can create customized tracking when running marketing campaigns. Here, we explain how to properly track a campaign click, for instance, using the Campaign URL Builder.

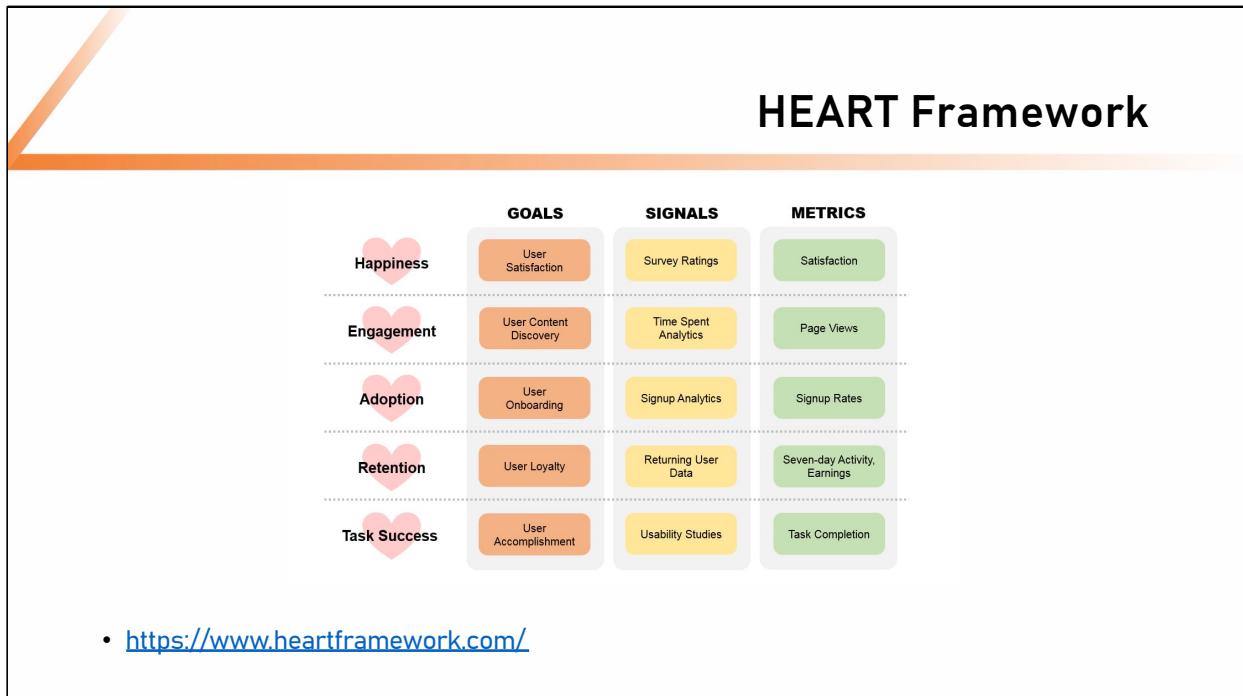
<https://ga-dev-tools.google/campaign-url-builder/>

Time commitment

How does it work?

- When a user starts a new session, Google Analytics begins recording the duration of the session (in milliseconds). The duration is sent to Analytics when one of the following events occurs:
 - User moves application screen in background
 - The user exits the application screen or web page (via For example, the user closes the tab, window or application; the user navigates to another screen or page).
 - The site or application freezes
- The duration is sent in a engagement_time_msec parameter and added to the next event collected.

Introduction to the concept of time in Google Analytics.



<https://www.heartframework.com/>

📌 Objective:

The **HEART Framework** is a user experience (UX) measurement methodology developed by **Google's UX research team**. It helps businesses assess and improve their digital products based on key user experience metrics.

What does HEART stand for?

The framework is divided into **five key dimensions** of user experience:

- **Happiness** – Measures user satisfaction and perception.
 - **Examples:** Net Promoter Score (NPS), customer satisfaction surveys, app store ratings.
 - **Why it matters?** Happy users are more likely to return and recommend your product.
- **Engagement** – Measures how actively users interact with the product.
 - **Examples:** Session duration, pages per visit, interaction frequency.
 - **Why it matters?** Higher engagement often indicates a better user experience.

- **Adoption** – Tracks how many users start using the product.
 -  **Examples:** New signups, first-time logins, downloads.
 -  **Why it matters?** Adoption rate reflects the product's appeal and onboarding effectiveness.
- **Retention** – Measures how many users return over time.
 -  **Examples:** Customer churn rate, repeat visits, subscription renewals.
 -  **Why it matters?** High retention signals a strong value proposition and user loyalty.
- **Task Success** – Assesses how efficiently users complete key tasks.
 -  **Examples:** Conversion rates, form completion rates, error rates.
 -  **Why it matters?** A smooth task flow leads to better user satisfaction and higher conversions.

Why Use the HEART Framework?

-  Provides a **structured** way to measure UX effectiveness.
-  Helps align UX goals with **business objectives**.
-  Encourages **data-driven** decision-making.
-  Applicable to **websites, apps, and digital products**.

How to Implement HEART in Google Analytics?

-  **Happiness** → Surveys & NPS
- Use Google Forms or Hotjar to collect **user feedback**.
-  **Engagement** → Session Metrics
- Track **time on site, bounce rate, and event tracking** in GA4.
-  **Adoption** → Funnel Analysis
- Use **GA4 events** to track **sign-ups and onboarding completion**.
-  **Retention** → User Cohorts
- Use **GA4 cohort reports** to track **returning visitors** over time.
-  **Task Success** → Conversion Tracking
- Set up **goal tracking** for key actions (e.g., purchases, signups).

Additional Resources

-  **Google's HEART Framework Overview:** [HEART Framework](#)
-  **User-Centered Metrics:** Google UX Research

HEART Framework

		Goals	Signals	Metrics	VARIATION A: Chat GPT		VARIATION B: Google Bard	
					CONTEXT OF EVALUATION	RESULT	CONTEXT OF EVALUATION	RESULT
Happiness	We want an AI tool that provides helpful and fun recipes for home cooks without feeling like too much information.	Goals are tasks performed by users or problems they may encounter.	Signals that tell us if the goal is accomplished.	Metric transforms signals into measurement scales based on user intent.				
		Bard AI's more concise recipe responses make negative expressions and allows users to enjoy the fun and innovation of the recipe.		Net Positive Alignment, the total sum of positive emotions minus the sum of negative emotions produced by an experience.	Impressions of blog	Net Positive Alignment 142%	Impressions of blog	Net Positive Alignment 189%
				Net Promoter Score, the likelihood of an experienced user to recommend the product to a peer.	Detailed	63%	Detailed	62%
				NPS	Helpful	71%	Helpful	73%
				NET PROMOTER SCORE	Innovative	10%	Innovative	30%
Engagement	We want users to engage with the command bar and suggestions other than asking for help.	Bard AI's more expansive list of category suggestions provides an engaging feature for more users to interact with.		First click interaction with the tool.	Fun	30%	Fun	49%
				Action mapping users' decisions after using the tool.	Long	16%	Long	8%
				User next steps	Confusing	3%	Confusing	5%
					Overwhelming	9%	Overwhelming	9%
					Unnecessary	3%	Unnecessary	3%
Adoption	Ideally, users first act will be to use the provided recipe, or interact with the tool more.	Chat GPT produces twice as many participants who want to type in a new command, indicating dissatisfaction with the current results.		User next steps	Other	4%	Other	7%
				Likelihood to use again	Represents new response	36%	Represents new response	34%
					Type in a new command	20%	Type in a new command	10%
					Try a different AI tool	11%	Try a different AI tool	7%
					Save and use recipe	67%	Save and use recipe	83%
Retention	We want to move users off of neutrality and towards feeling like they will use the tool again.	Only 10% of users believe they are likely to use Chat GPT to find a recipe again, compared to only 3% of Bard users.		Type in command	Other	1%	Other	1%
				Likelihood to use again	Very Likely	44%	Very Likely	52%
					Somewhat Likely	24%	Somewhat Likely	13%
					Neutral	14%	Neutral	12%
					Somewhat Unlikely	7%	Somewhat Unlikely	2%
Task Success	Users should have success using the command bar and the suggested commands.	Bard's suggested commands provide more places for successful interaction.	Geauge amount of users successful when given a goal/directive.	Type in command	Very Unlikely	4%	Very Unlikely	1%
				Success	65%	Success	81%	

<https://www.heartframework.com/>

a completed framework card for a client.

Let's Practice in GA4 Demo accounts

Access to Google GA4 demo account



<https://support.google.com/analytics/answer/10993011?hl=en>

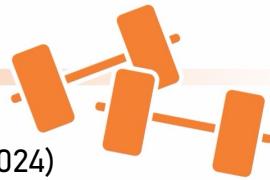
For

Google Merch Shop <https://shop.merch.google/>

We're revisiting the exercise in Google's demo account on Google's shopping site.

Exercise alone or in pairs

In the Google DEMO account (GA4),
Product performance analysis with Explore (by September 2024)



- Which product category generated the most revenue on the demo site?
- Which product has the highest conversion rate?
- Identify the pages with the highest engagement rates.
- Which traffic channels generate the most new users?

<https://support.google.com/analytics/answer/6367342?sjid=1676984329805570328&4-EU#access&zippy=%2Cin-this-article>

The exercise is now done alone or in pairs, and you need to find slightly more complex metrics.

Exercise alone or in pairs

In the Google DEMO account (GA4),



Audience creation

- Create an audience of users who have added a product to the shopping cart, but haven't finalized their purchase.
- Create an audience of users who have visited a product page without adding it to the shopping cart.

[https://support.google.com/analytics/answer/6367342?sjid=1676984329805570328
4-EU#access&zippy=%2Cin-this-article](https://support.google.com/analytics/answer/6367342?sjid=1676984329805570328#access&zippy=%2Cin-this-article)

Here, students are asked to create a custom audience in Google Analytics using the demo account.

Exercise alone or in pairs

In the Google DEMO account (GA4),



Creating funnels in explore

- Creation of a purchase funnel (from session start to purchase)
- How can this funnel be compared to check whether mobiles are as efficient as desktops?

[https://support.google.com/analytics/answer/6367342?sjid=1676984329805570328
4-EU#access&zippy=%2Cin-this-article](https://support.google.com/analytics/answer/6367342?sjid=1676984329805570328#access&zippy=%2Cin-this-article)

Here, students are asked to create a custom acquisition funnel in the Google Analytics demo account.

Some open discussions



- A customer wants to know why sales have fallen over the last 30 days. What do you check?
- Conversion tracking is not working properly, how can I identify the problem?
- You need to improve the engagement rate on a key page. What do you measure and how?

The goal here is to take a few minutes to discuss business challenges and how to transform them into metrics in Analytics. This is an essential role of the Digital Product Manager.

Exercise alone or in pairs

In the Google DEMO account (GA4),



New User Analysis :

- Question: From October 1 to 31, 2024, how many new users visited the site?
- Goal: Use the acquisition ratio to obtain this metric.

<https://support.google.com/analytics/answer/6367342?sjid=16769843298055703284-EU#access&zippy=%2Cin-this-article>

We continue the exercise alone or in pairs to be able to calculate the acquisition rate.

Exercise alone or in pairs

In the Google DEMO account (GA4),



Best-performing traffic source :

- Question: Between November 1 and 15, 2024, which traffic source generated the most sessions?
- Goal: Identify the most efficient source in the acquisition report.

<https://support.google.com/analytics/answer/6367342?sjid=16769843298055703284-EU#access&zippy=%2Cin-this-article>

The goal here, in this exercise, is to identify the main traffic sources from a marketing perspective.

Exercise alone or in pairs

In the Google DEMO account (GA4),



Conversion on Add to Cart :

- Question: For the period from October 1 to 30, 2024,
- how many times has the add_to_cart event been triggered?
- Goal: Identify the triggers for a specific e-commerce event.

<https://support.google.com/analytics/answer/6367342?sjid=1676984329805570328&4-EU#access&zippy=%2Cin-this-article>

The goal here is to introduce the concept of adding to the cart and its implications for conversion.

Exercise alone or in pairs

In the Google DEMO account (GA4),



Geographic performance :

- Question: Between October 1 and November 15, 2024, which region of the United States generated the most revenue?
- Goal: Explore performance by region in geographic reports.

<https://support.google.com/analytics/answer/6367342?sjid=1676984329805570328&4-EU#access&zippy=%2Cin-this-article>

Here, we raise public awareness about the geographical exploration of data, with some warnings regarding the quality of data associated with IP addresses.

Exercise alone or in pairs

In the Google DEMO account (GA4),



- Question: Between September 1 and 30, 2024, for products added to the shopping cart (add_to_cart), which source of traffic generated the most additions?
- Goal: Use "Traffic source" as a secondary dimension in the event report.

<https://support.google.com/analytics/answer/6367342?sjid=1676984329805570328&4-EU#access&zippy=%2Cin-this-article>

optional exercise where we play with a second dimension to achieve more precise traffic and analytics

Exercise alone or in pairs

In the Google DEMO account (GA4),



Page performance by device type :

- Question: Over the period August 1 to 31, 2024, which page generated the highest click-through rate for users on mobile devices only?
- Goal: Apply a filter to isolate mobile devices and analyze page performance.

<https://support.google.com/analytics/answer/6367342?sjid=16769843298055703284-EU#access&zippy=%2Cin-this-article>

The purpose of the exercise here is to specifically identify mobile traffic.

Exercise alone or in pairs

In the Google DEMO account (GA4),



Paid Traffic and User Behavior:

- Question: Between October 1 and November 15, 2024, for users coming from paid search, how many pages did they visit on average?
- Goal: Filter on medium = paid_search and analyze engagement metrics (page views per session).

<https://support.google.com/analytics/answer/6367342?sjid=16769843298055703284-EU#access&zippy=%2Cin-this-article>

Here, the concept of paid traffic is introduced through specific filters.

Exercise alone or in pairs

In the Google DEMO account (GA4),



Average time per traffic source :

- Question: Between August 1 and 31, 2024, which traffic source generated the longest average session duration for French visitors only?
- Goal: Filter by country = France and analyze traffic source performance.

<https://support.google.com/analytics/answer/6367342?sjid=1676984329805570328&4-EU#access&zippy=%2Cin-this-article>

The task here is to identify the duration of sessions by geographical area.

Exercise alone or in pairs

In the Google DEMO account (GA4),



Conversions by Country and Device Type :

- Question: Between September 1 and October 31, 2024, which country recorded the most conversions from tablets?
- Goal: Use "Country" and "Device type" as dimensions to analyze conversions

<https://support.google.com/analytics/answer/6367342?sjid=16769843298055703284-EU#access&zippy=%2Cin-this-article>

The aim of the exercise here is to raise awareness not only of the geographical dimension but also of the device used by the user to browse the website.

Exercise alone or in pairs

In the Google DEMO account (GA4),



Recurring Users by Acquisition Type :

- Question: For the month of September 2024, among recurring users, which marketing campaign brought in the highest number of sessions?
- Goal: Filter on recurring users and analyze campaigns in acquisition reports.

<https://support.google.com/analytics/answer/6367342?sjid=16769843298055703284-EU#access&zippy=%2Cin-this-article>

Focus in this exercise on recurring traffic.

Summary

In this lesson, we explored how to quantify and evaluate user experience using data.



You learned the difference between metrics (like task completion rate, time on task, error rate), analytics (tracking user behavior through tools like Google Analytics or Hotjar), and tracking techniques (such as heatmaps, funnels, and event tagging).

The goal is to move beyond assumptions — by collecting real user data, you can make informed design decisions, identify pain points, and measure how your design performs over time.

Key takeaway? What gets measured, gets improved. Use metrics and analytics as your compass to design experiences that truly serve users and meet business goals

- <https://www.thyngster.com/ga4-measurement-protocol-cheatsheet/>
- <https://www.autoriteprotectiondonnees.be/citoyen/themes/internet/cookies>
- https://support.google.com/analytics/table/13948007?visit_id=638753942898755878-2040512900&rd=2
- <https://ga-dev-tools.google/campaign-url-builder/>
- <https://www.heartframework.com/>