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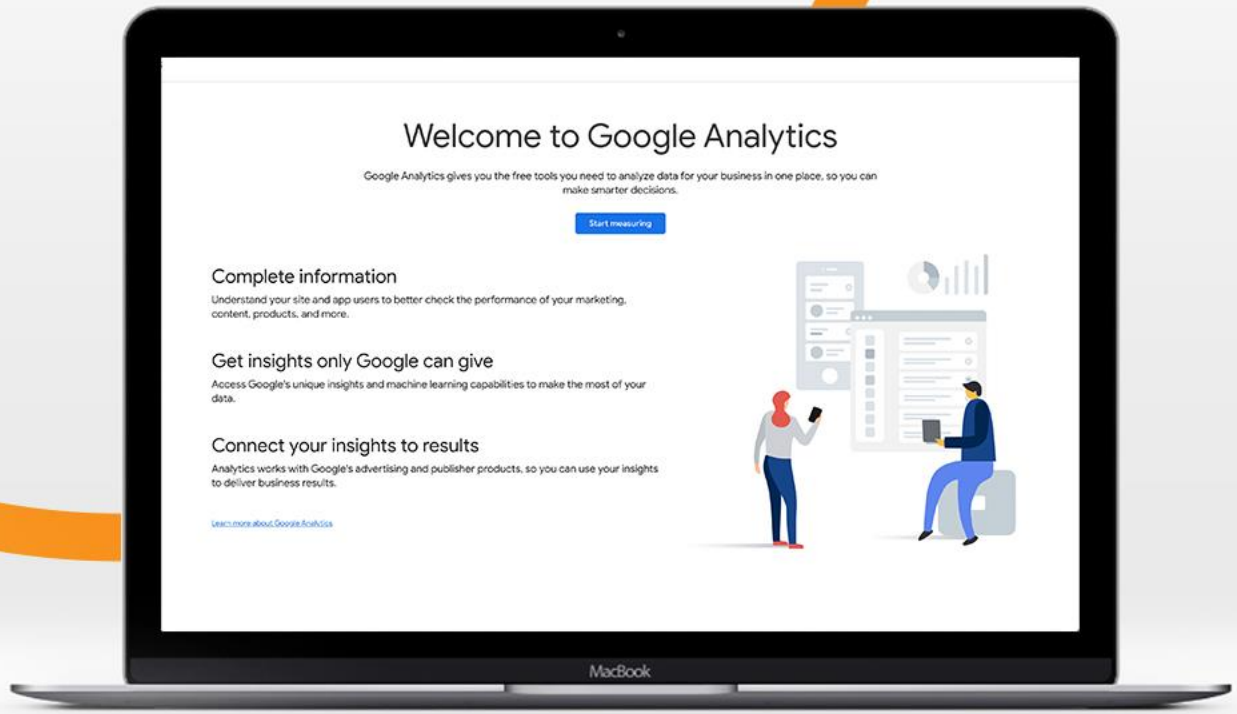

Google Analytics 4

Experienced User's Guide | **Level Two**

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Current Google Analytics (UA)

What is Google Analytics?
Quick Facts

Google Analytics is a free Analytics tool for Websites & Mobile Apps. It shows:

- ➔ How many people visited your website & their characteristics
- ➔ How people arrived at your website
- ➔ What they did on your website
- ➔ Whether they purchased anything on your website

It gives you data and insights that help you:

- ➔ Improve business performance
- ➔ Understand your customers
- ➔ Enhance your website performance
- ➔ Prioritise and optimise marketing investment

Do I need Google Analytics?

Every business needs some type of website analytics tool.
Google Analytics is a good choice for a number of reasons:

1. **It's free** and has very powerful analysis capabilities

2. **It's the most widely used** and most popular analytics platform, and you can use it as your primary tool or alongside others

3. **Every website can install it** no matter what technology it is made on, and it takes less than 1 hour to install on a website

4. **Its easy integration** with other Google tools like Google Ads and Google Search Console, and integration with data visualisation platforms like Tableau and Power BI

A brief history of Google Analytics

2005

Google purchased Urchin

- Unique visitors tracking
- Visitor segment reporting
- Marketing campaign results

2009

Launched Async Version

- Event tracking
- Multi-channel funnels
- Realtime reporting

2014

Google Universal Analytics (UA)

- Session-based management
- Attribution reporting
- Custom dimensions and metrics

2020

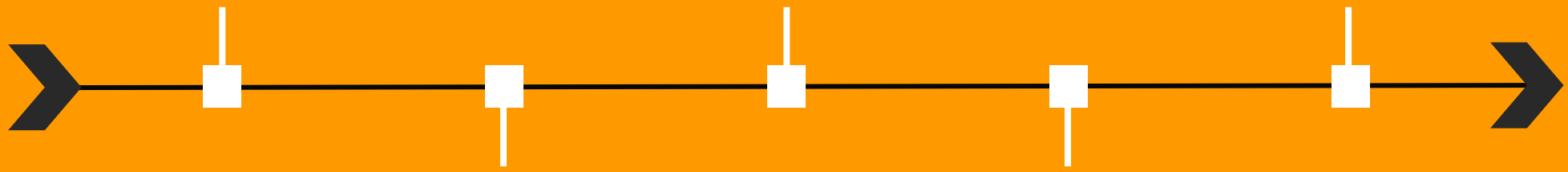
GA4 Launched

- Event-based management
- Cross-device tracking
- AI-powered insights

2023

No More UA

- Google announced that UA will officially retire and stop processing new data on July 1, 2033



If you are using Google Analytics now, you will need to migrate to GA4 before July 1, 2023.

After this time, your old GA (UA) will stop collecting data.

Action now: You'll need time to configure and test your new GA4 before July, 2023.

MEDIA PRECINCT

Google Analytics 4

What's new?
Key features of GA4

Cross Platform Analytics

Enables you to track users across different browsers, devices and apps

Enhanced Measurement of Events

Basic interactions are now tracked automatically

User-centric Reporting

Focus on user-centric reporting, with insights into how users interact with your brand across platforms

Machine Learning and AI

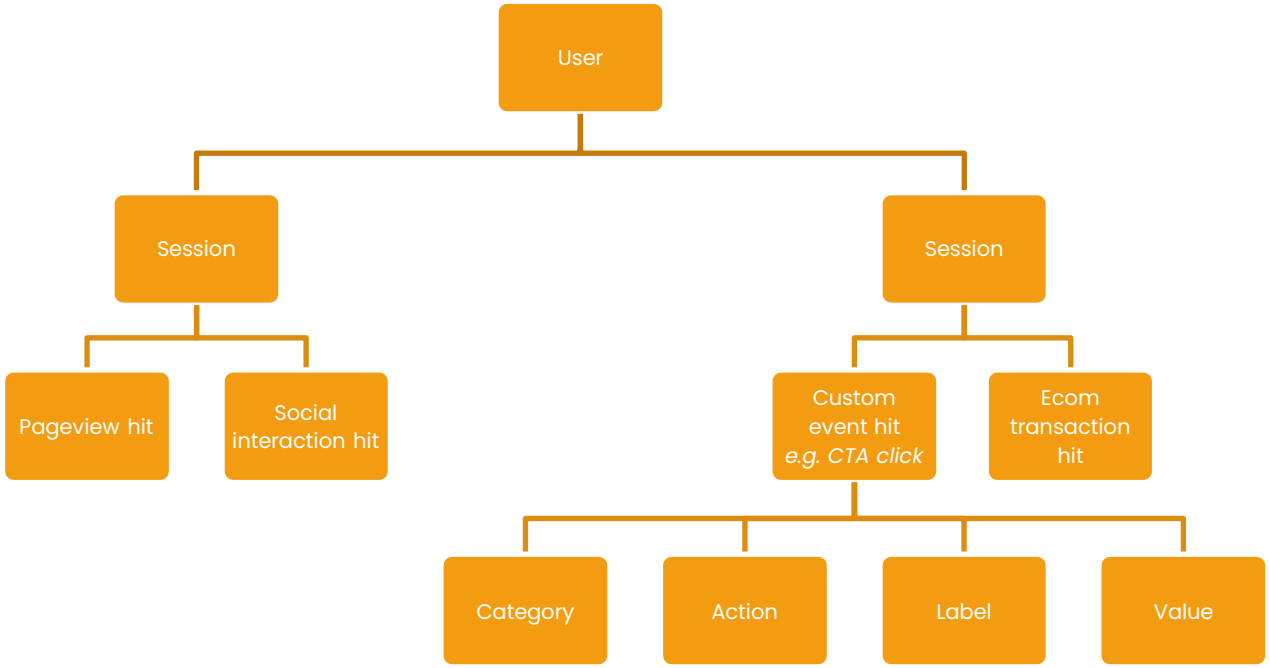
Uses machine-learning and AI to provide more accurate and relevant insights, like forecasting future trends

Key differences – UA to GA4

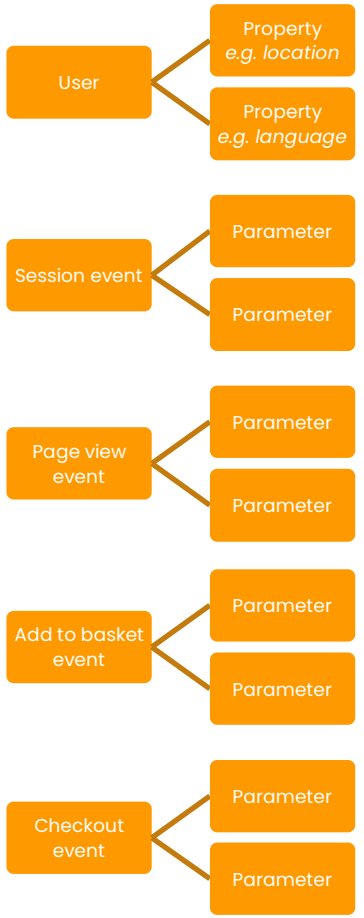
Universal Analytics	Google Analytics 4
Data is based on sessions You can only see behaviour within a single session which makes it hard to see the full customer journey or take previous interactions into account in attribution.	**Data is based on events** Tracking interactions rather than events makes it possible to see how users are interacting with your brand across different touchpoints.
Event set up is manual Setting up tracking for specific actions on your site (scroll, click, view etc) is manual. UA begins tracking the day you set it up (you cannot view that attribute historically).	**Events are collected automatically** A huge number of interactions are automatically tracked. You can also often surface historical data for a newly defined data point.
Limited cross-device reporting Data is reported in silo, making it difficult to de-duplicate users across devices. This relies on the device identifier from the user's browser for the majority of reports.	**Full cross-device reporting** Data is de-duplicated across devices, using a combination of data collection techniques including your own persistent identifier (set up required).
Lots of pre-defined reports, limited custom reporting Reports are often preset and limited in customisation and detail. They offer little detail on user interactions, restricted customisation of dashboards and minimal attribution capability.	**Limited pre-defined reports, more flexibility for custom** GA4 includes AI-powered insights that can help you better understand your audience as well as new tools such as Analysis Hub, Exploration Reports, Funnel and Path Analysis.

Key differences in basic metrics

Universal Analytics
Session-centric



Google Analytics 4
Event-centric



GA4 has an **Engaged Sessions** metric instead of Bounce Rate. An engaged Session is defined as a user who spent 10 seconds or more on the site/app or viewed 2 or more screens/pages or had a conversion event.

How do they do it?
Identifying a ‘single user’

In GA4, a user doesn’t have to be logged in for cross-device tracking to work. GA4 uses a combination of data collection techniques to perform cross-device tracking.

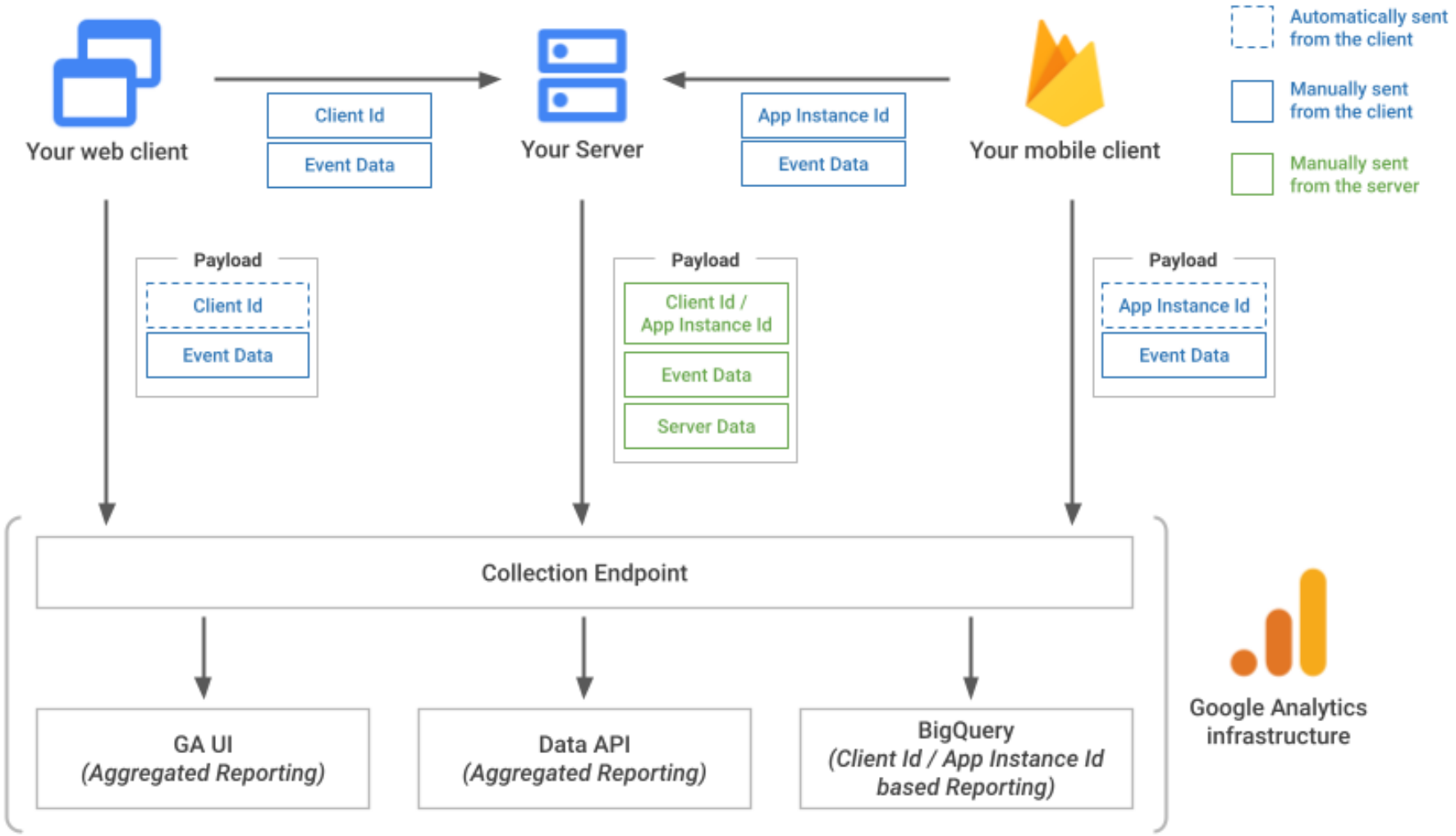
- **Device graphing** is the process of identifying a user's devices and linking them together. GA4 uses a combination of data points to create a device graph that links a user's devices together.

- **User identification** involves assigning a unique identifier to each user, which allows GA4 to track their activity across different devices. GA4 can use a variety of identifiers, including Google Signals (if the user is logged in to a Google account), client IDs (which are stored in browser cookies), and user IDs (generated by the website or app).

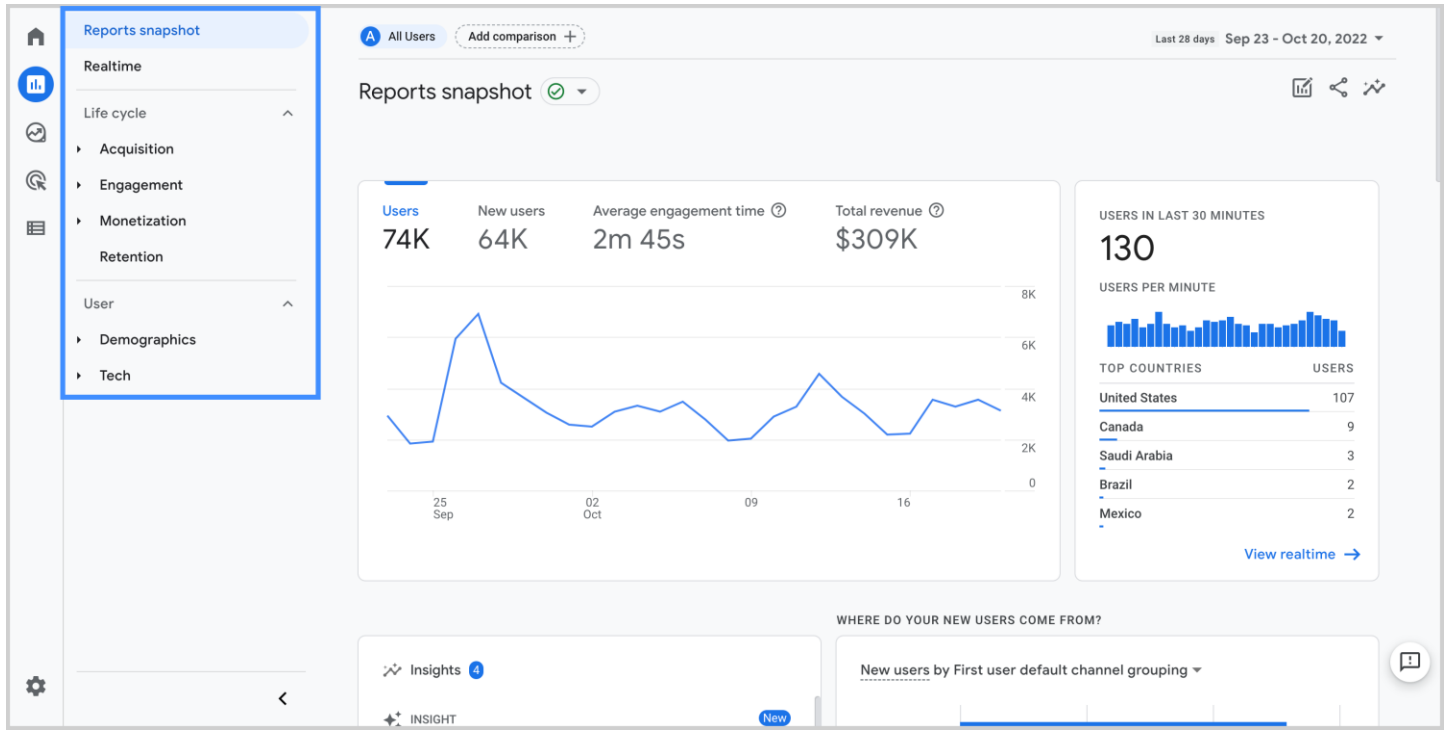
Similarity between several data points can determine if two devices belong to the same user. Some of these are:

- **IP address**
- **User agent:** The user agent string contains information about the device, such as the browser and operating system.
- **Screen resolution**
- **Client ID:** GA4 can use a client ID, which is stored in a cookie on the user's device, to link devices together.
- **Login information:** If the user is logged in to a Google account, GA4 can use Google Signals to link devices together. Google Signals allows GA4 to use the user's login information to link devices across multiple browsers and devices.

How GA4 works?



Key Features
Completely new interface



The new dashboard lets you see your website and apps in the same account.

It also categorises some of the old reports differently, as well as giving you access to new reports and metrics.

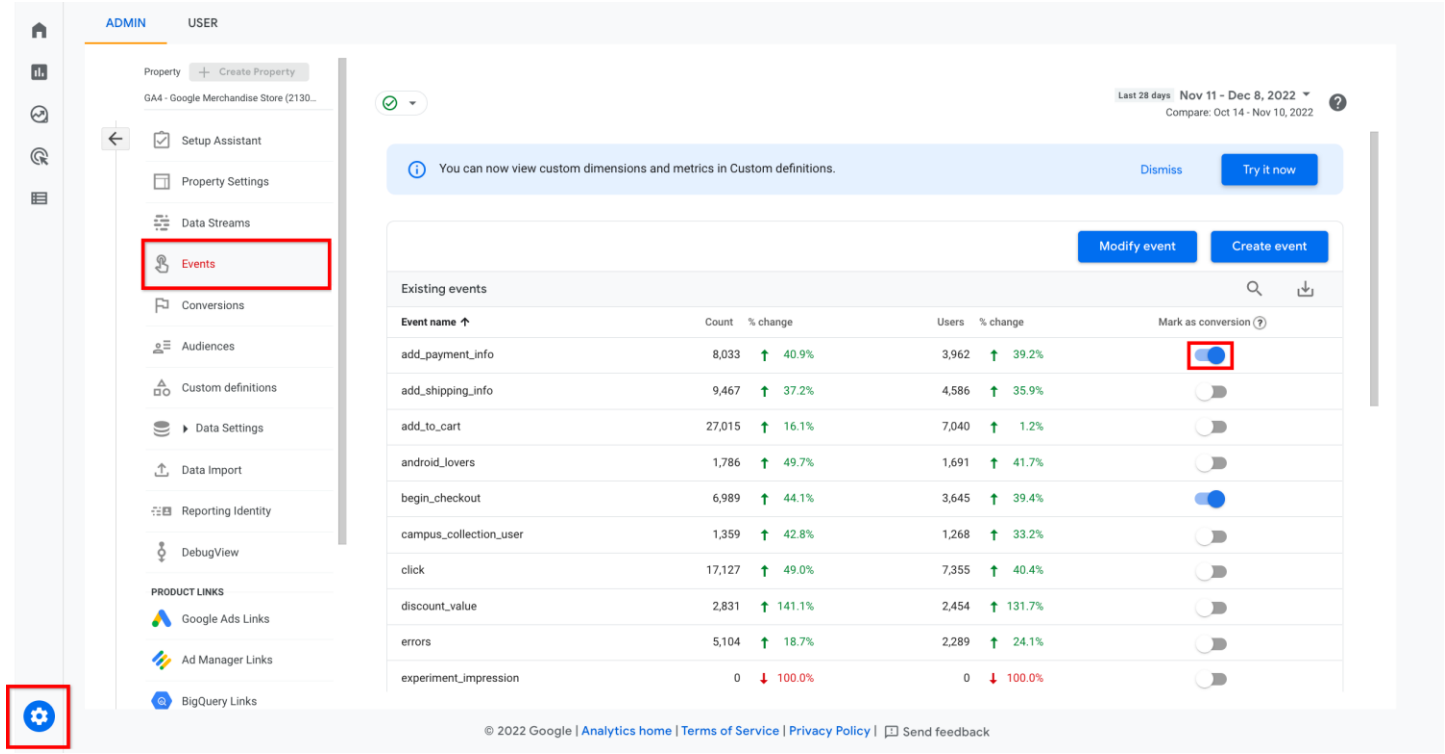
It may take a while to get used to the new logic. A page view, video play or download will all be seen as events.

There is also some new terminology – e.g. “average engagement time” is what was called “average session duration” in UA.

Outbound clicks and scroll depth are easier to access – opt in instead of manually setting up.

Key Features

There are no goals in GA4

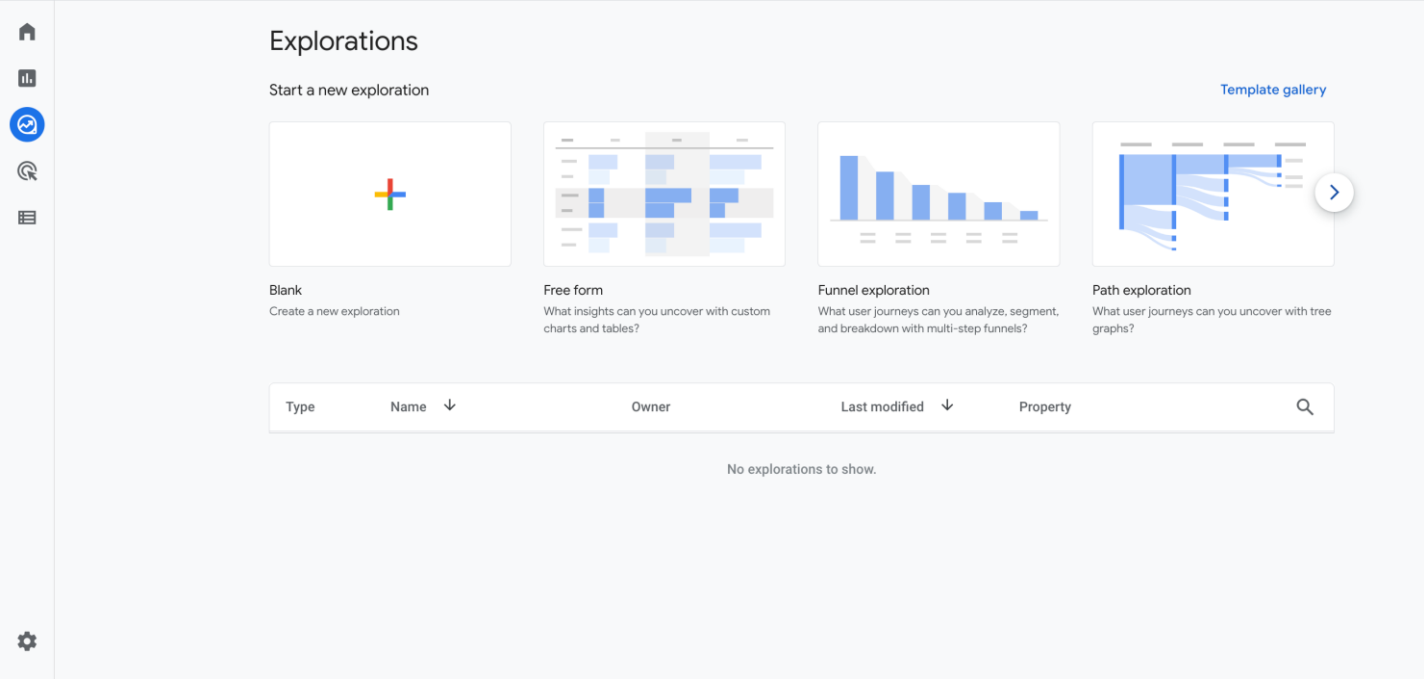


Your old UA goals won't appear in GA4.

You'll need to review the GA4 events to track your goals using this method.

Review the list of events automatically collected. Opt out of what you don't want to track. Add any custom events you need.

Key Features
Advanced Analytics



One of the most powerful changes GA4 brings is the ability to perform advanced analytics and create multiple data visualisations.

Using the Explore tab you can use the pre-built templates or create your own.

For example, you can perform a funnel analysis and see the steps customers take before purchasing. Similarly, the path exploration template helps you see which events users trigger as they visit your website.

Note, this feature can be tricky for beginners – more one to use as you become experienced with GA4.

Key Features
New reports

Realtime Report

Helps you monitor your website activity as it happens. Track the performance of a campaign in real time, or see traffic from social media as it happens.

Engagement Report

This report helps you track how many people are engaged with your website and how people use your site.

You'll find sub-reports to track different events and conversions, and your most important pages and app screens.

Retention Report

Helps track how many users visit your site compared to returning.

Use this data to get users to return to your site by getting them to sign up for your newsletter or follow you on social. You'll also be able to see user retention over time and lifetime value.

Acquisition Report

See where your visitors are coming from. This report shows the channels that are driving traffic to your site.

Monetisation Report

This report show the total revenue, purchases, average purchase and average revenue per user.

If you run an ecommerce store, this is where you will find out which products get the most sales in your store.

Demographic Report

See which country your visitors are coming from.

Use this to guide your geolocation marketing campaigns, or create personalized messages for users from different locations.

Key Features
Using GA4

Key Differences	Universal Analytics (UA)	Google Analytics 4 (GA4)
Setup	It uses property & views - Mainly Website data (& very limited App data)	GA4 enables you to track data from apps & websites
Learning Curve	Easy to learn	Steep learning curve
User Friendliness	Completely user-friendly	Not so user-friendly
Reporting	Restricted cross-platform & cross-device reporting	Complete cross-platform & cross-device reporting
User Tracking	Session Tracking	Event-based Tracking
Conversions	Conversion per session for each goal	It counts every instance of the conversion event

Checklist

Before July 1, 2023

1. **Upgrade to GA4:** If you haven't already, you should upgrade your existing Universal Analytics (UA) property to GA4. This will ensure that you continue to collect data and insights after the deprecation of UA.

2. **Verify data collection:** Once you've upgraded to GA4, you should verify that data collection is working as intended. You can use the Real-time reporting feature in GA4 to ensure that data is being collected and processed correctly.

3. **Set up conversion tracking**: Conversion tracking is a crucial component of GA4, and you should set up and test your conversion tracking to ensure that it's accurately tracking your business goals and objectives.

4. **Review and adjust data settings**: GA4 collects a lot of data by default, and you should review and adjust your data settings to ensure that you're collecting the data that's most relevant to your business. This may include setting up custom dimensions and metrics, excluding certain pages or events from tracking, or using data filters to include or exclude specific data.

5. **Review privacy policies and disclosures:** GA4 places a greater emphasis on privacy and data protection, and you should review your privacy policies and disclosures to ensure that they accurately reflect your data collection and processing practices.

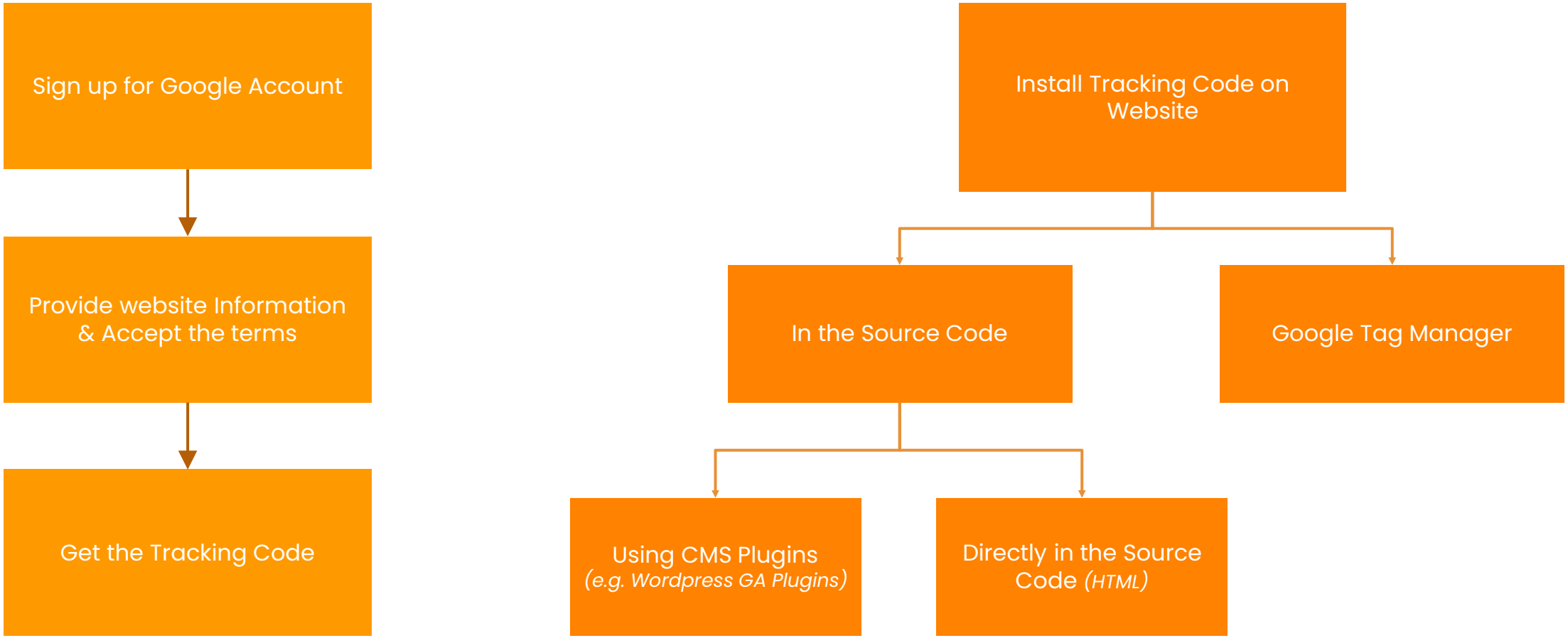
6. **Train your team:** GA4 introduces new concepts and data modeling techniques, and you should train your team to ensure that they understand how to use the platform effectively and generate insights that drive business growth.

Action ownership & role of agency

Side	Web / App Property Owner	Digital Agency
PIC	Data Science / Analytics / Developers Team	Digital Execution Team
Action	• Set-up / Migrate UA to GA4 • Set-up GA4 Events • Sanity Check and Maintain the Data Hygiene • Download our migration checklist	• Guide on what events are necessary for running and tracking Digital Ad Campaigns i.e. provide list of micro and macro goals to be tracked in Google Analytics 4 • Provide rationale on why it needs to be tracked and what the end metrics / data should look like in the report

Technical Guide

How to set up Google Analytics?

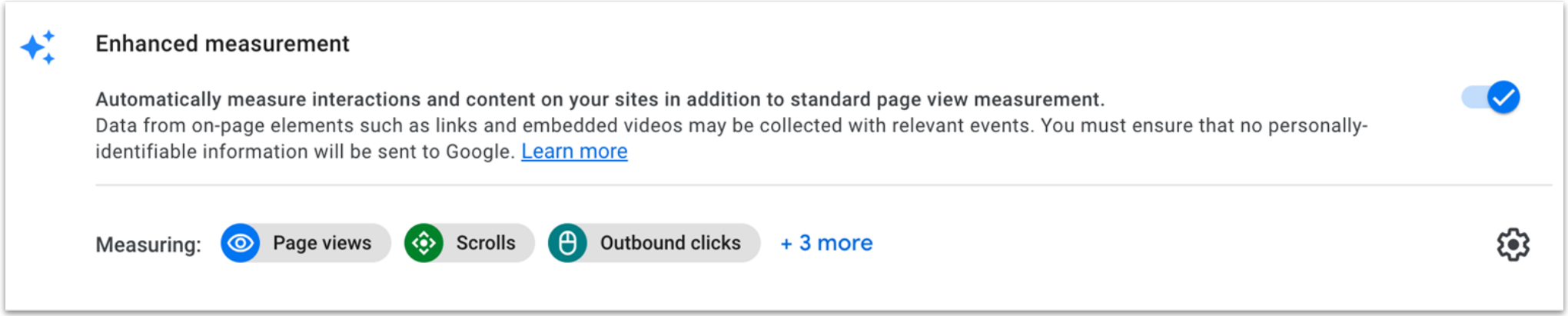


Type of Events:
1) Automatically collected events

Automatically collected events are events that are collected by default when you set up Google Analytics on your website or app. Automatically collected events are triggered by basic interactions with your app and/or site. As long as you use the Google Analytics for Firebase SDK or gtag.js, you don't need to write any additional code to collect these events.

There are some Enhanced measurement events - that are collected when you set up Google Analytics on your website or app & enhanced measurement is enabled. Enhanced measurement lets you measure interactions with your content by enabling options (events) in the Google Analytics interface. No code changes are required. When you enable these options for a web data stream, your Google Analytics tag starts sending events right away. To the right, are the Steps to enable these events:

1. **Log into Google Analytics, click Admin.**
2. **Make sure you are in the correct account & property.**
3. **In the Property column, click Data Streams > Web.**
4. **Under Enhanced measurement, slide the switch On to enable all options.**



Type of Events:
1) Automatically collected events

App & Web Event	Automatically triggered...
first_visit	the first time a user visits a website or launches an Android instant app with Analytics enabled
session_start	when a user engages the app or website. A session ID & session number are generated automatically with each session & associated with each event in the session
user_engagement	when the app is in the foreground or webpage is in focus for at least one second

Web Event	Automatically triggered...
click	each time a user clicks a link that leads away from the current domain
file_download	when a user clicks a link leading to a file (with a common file extension) of the following types: document, text, executable, presentation, compressed file, video, audio
form_start	the first time a user interacts with a form in a session
form_submit	when the user submits a form
page_view	each time the page loads or the browser history state is changed by the active site
scroll	the first time a user reaches the bottom of each page (i.e., when a 90% vertical depth becomes visible)
video_complete	when the video ends - For embedded YouTube videos that have JS API support enabled.
video_progress	when the video progresses past 10%, 25%, 50%, & 75% duration time - For embedded YouTube videos that have JS API support enabled
video_start	when the video starts playing - For embedded YouTube videos that have JS API support enabled.
view_search_results	each time a user performs a site search, indicated by the presence of a URL query parameter

Type of Events:
1) Automatically collected events

App Event	Automatically triggered...
ad_click	when a user clicks an ad
ad_exposure	when at least one ad served by the Mobile Ads SDK is on screen
ad_impression	when a user sees an ad impression
ad_query	when an ad request is made by the Mobile Ads SDK
ad_reward	when a reward is granted by a rewarded ad served by the Mobile Ads SDK
adunit_exposure	when an ad unit served by the Mobile Ads SDK is on screen
app_clear_data	when the user resets/clears the app data, removing all settings and sign-in data - Android only
app_exception	when the app crashes or throws an exception
app_remove	when an application package is removed (uninstalled) from an Android device - Android only
app_store_refund	when an in-app purchase is refunded by Google Play - Android only
app_store_subscription_cancel	when a paid subscription is cancelled in Google Play - Android only
app_store_subscription_convert	when a free-trial subscription is converted to a paid subscription
app_store_subscription_renew	when a paid subscription is renewed
app_update	when the app is updated to a new version and launched again
dynamic_link_app_open	when a user re-opens the app via a dynamic link
dynamic_link_app_update	when the app is updated to a new version and is opened via a dynamic link - Android only
dynamic_link_first_open	when a user opens the app for the first time via a dynamic link
error	logged in place of an event that can't be logged because it is invalid in some way
firebase_campaign	when the app is launched with campaign parameters
firebase_in_app_message_action	when a user takes action on a Firebase In-App Message
firebase_in_app_message_dismiss	when a user dismisses a Firebase In-App Message
firebase_in_app_message_impression	when a user sees a Firebase In-App Message
first_open	the first time a user launches an app after installing or reinstalling it
in_app_purchase	when a user completes an in-app purchase, including an initial subscription, that is processed by the Apple App Store or Google Play Store.
notification_dismiss	when a user dismisses a notification sent by Firebase Cloud Messaging (FCM) - Android only
notification_foreground	when a notification sent by FCM is received while the app is in the foreground
notification_open	when a user opens a notification sent by FCM
notification_receive	when a notification sent by FCM is received by a device when the app is in the background - Android only
os_update	when the device operating system is updated to a new version. The previous operating system version id is passed as a parameter
screen_view	when a screen transition occurs

Type of Events:
2) GA4 recommended events (to be activated)

Recommended events are events that you implement, but that have predefined names and parameters. These events unlock existing and future reporting capabilities. Adding these events to your website or mobile app helps you measure additional features and behavior as well as generate more useful reports. Because these events require additional context to be meaningful, they're not sent automatically.

For Online Sales (ecommerce kinds of businesses)

These Events are recommended when you want to measure sales on your site or app. They're useful for retail, ecommerce, education, real estate, and travel. Sending the events populates the Ecommerce purchases report.

Event	Trigger when
add_payment_info	a user submits their payment information
add_shipping_info	a user submits their shipping information
add_to_cart	a user adds items to cart
add_to_wishlist	a user adds items to a wishlist
begin_checkout	a user begins checkout
generate_lead	a user submits a form or a request for information
purchase	a user completes a purchase
refund	a user receives a refund
remove_from_cart	a user removes items from a cart
select_item	a user selects an item from a list
select_promotion	a user selects a promotion
view_cart	a user views their cart
view_item	a user views an item
view_item_list	a user sees a list of items/offerings
view_promotion	a user sees a promotion

Type of Events:
2) GA4 recommended events (to be activated)

For all Properties (all kinds of businesses)

We recommend these events to all customers in all business verticals.

Event	Trigger when
login	a user logs in
purchase	a user completes a purchase
refund	a user receives a refund
search	a user searches your content
share	a user shares content
sign_up	a user signs up to measure the popularity of each sign-up method
ad_impression	a user sees an ad impression, for app only

For games & gaming related businesses

We recommend these events for games properties. Sending these events populates the games reports.

Event	Trigger when
earn_virtual_currency	a user earns virtual currency (coins, gems, tokens, etc.)
join_group	a user joins a group to measure the popularity of each group
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 levels-up in the game
post_score	a user posts their score
select_content	a user selects content
spend_virtual_currency	a user spends virtual currency (coins, gems, tokens, etc.)
tutorial_begin	a user begins a tutorial
tutorial_complete	a user completes a tutorial
unlock_achievement	a user unlocks an achievement

Type of Events:
3) Custom Events (to be manually implemented)

Custom events are events that you define. Make sure you only create custom events when no other events work for your use case. Custom events don't show up in most standard reports so you need to set up custom reports or explorations for meaningful analysis. A custom event is an event that has a name and set of parameters that you define. A custom event lets you collect data that Analytics doesn't otherwise collect automatically or recommend.

How to Create a custom event

Configuring the custom event can be done using one of the following options:

- The Google tag (web)
- Google Tag Manager (web)
- Firebase (apps)

Alternatively, you can create a custom event in Analytics, for example, when you want to create a conversion event based on an existing event.

Some Useful Resources for Developers and Analytics Team	
Developer Guide on how to set up an Event	https://developers.google.com/analytics/devguides/collection/ga4/events
Custom events	https://support.google.com/analytics/answer/12229021
Event Collection limits	https://support.google.com/analytics/answer/9267744
Setting Ecommerce Measurement Events	https://developers.google.com/analytics/devguides/collection/ga4/ecommerce
TMP - Google Analytics 4 Setup & Migration Checklist	https://docs.google.com/spreadsheets/d/1Tyd4EAI7x9Zue034dWEhm0i7qqWLhsiWg421vF4I4i4/
Essential migration steps for Google Analytics 4	https://support.google.com/analytics/answer/10759417

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Thank You