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June 2022
* This comparison is based on the publicly available information gathered in 2022

Analytics platform comparison

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Introduction

At DEPT® we strive to find solutions that fit your needs. With many analytics platforms available on a market where do we even begin?

In this deck we present an overview of the most common analytics tools that we are ready (but not limited) to implement for you. With this, we hope to give you an idea of which platforms are more suitable for the measurement requirements you have in mind.

We will discuss:
· Data processing & connectivity
· Reporting features
· Tag manager
· Data security
· Integrations

Of the following platforms:
· Adobe Analytics
· Google Analytics
· Matomo
· Piwik PRO
· Snowplow

In the end, there is a general overview of all discussed chapters and our advice. It is a lot of information, so if you have any questions please reach out to us to discuss further.

Data processing & connectivity

	Universal Analytics	Google Analytics 4	Matomo Cloud	Piwik PRO Core	Snowplow	Adobe Analytics
Data sampling	Automatic sampling for more than 500K sessions per month	Sampling above 10M events in advanced reports	✗	Piwik Pro - no data sampling Piwik Pro Cloud - 500 million	✗	✗ Except in selected Audience Manager reports
Access to raw data	✗	BigQuery	API, Tableau connector	✓	✓	Data feeds, data warehouse and FTP/SFTP export
Data retention	Configurable	GA4 - 14 months GA4 360 - 50 months	14 months	14 months	Unlimited	25 months (configurable)
Data anonymization	✓	✓	✓	✓	✓	✓
Irreversibility of anonymized data	✓	✓	✓	No available information	✓	✓

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Data sampling

Data sampling is a statistical analysis technique used to select, manipulate and analyze a representative subset of data points to identify patterns and trends in the larger data set. It enables data scientists, predictive modelers and other data analysts to work with a small, manageable amount of data to build and run analytical models more quickly, while still producing accurate findings.

Data retention

Data retention is the storing of information for a specified period. The objective is to keep important information for future use or reference, and to organize information so it can be searched and accessed at a later date and to dispose information that is no longer needed or allowed from a GDPR perspective.

Irreversibility of anonymized data

De-anonymization is the reverse process in which anonymous data is cross-referenced with other data sources to re-identify the anonymous data source. To adhere to privacy regulations like GDPR, there should be no way to de-anonymize the data that has already been anonymized.

Raw data access

Raw data is a set of information that was delivered from a certain data entity to the data provider and has not been processed yet by machine nor human. This allows the most granular access to data to deliver deep insight into users' online behavior.

Data anonymization

Data anonymization is the process of protecting private or sensitive information by erasing or encrypting identifiers that connect an individual to stored data. For example, if there is a Personally Identifiable Information (PII) such as names, social security numbers, and addresses through a data anonymization process that retains the data, but keeps the source anonymous.

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Reporting features

	Universal Analytics	Google Analytics 4	Matomo Cloud	Piwik PRO Core	Snowplow *	Adobe Analytics
PII data processing	Only hashed PII is allowed	Only hashed PII is allowed	Non-hashed and hashed PII is allowed	Non-hashed and hashed PII is allowed	PII Pseudonymization and IP anonymization is allowed	Non-hashed and hashed PII is allowed
Custom dimensions	Up to 50 custom dimensions	Up to 50 custom dimensions	50 dimensions per scope	Up to 25 custom dimensions	Unlimited	Up to 300 custom dimensions
User flow reporting	✓	✓	✓	✓	✓	✓
Content tracking	✓	✓	✓	✓	✓	✓
Report download/share	✓	✓	✓	✓	✓	✓
Custom visualization	✓	✓	✓	✓	✓	✓

*Snowplow does not have reporting option on its own. All possible reports can be done with external tools like: Tableau, Datastudio, Power BI etc.

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PII data processing

PII stands for Personally Identifiable Information. It is any information that helps to identify who the user is - directly or indirectly. Common PII data includes IP addresses, names, surnames, date of birth, emails etc. This information should be at minimum anonymized with hashing.

Custom dimensions

Dimensions are attributes and characteristics that can be collected. For example, country, browser, language etc. If the analytics platform does not provide all the information, can be created custom dimensions to capture information that are missing.

User flow reporting

The user flow report allows to dive into the path that a typical user would go through to complete a task. For example, steps someone takes to complete a purchase, where does he exit from, where did he come from and such. Such information will help to identify possibilities for optimization.

Content tracking

Content tracking allows to measure performance of blog entry, pop-up, banners, and other website elements. With this information it can be optimized the content to drive more conversions and engagement.

Report download

Oftentimes analytics suite consists of multiple pages and rows that can be used to analyze off the screen or combine into a single report. It is possible to do with a report download option.

Custom visualization

To combine dimensions and metrics that are not readily available in the standard report, can be used the custom visualization, such as dashboard and reports. Through visuals, not only the data will be easier to digest, it will be readily available for deeper analyses and presentation to the stakeholders.

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Tag Manager

	Universal Analytics	Google Analytics 4	Matomo Cloud	Piwik PRO Core	Snowplow*	Adobe Analytics
Tag template library	✔	✔	✔	✔	✔	✔
Custom tags	✔	✔	✔	✔	✔	✔
Built-in variables	✔	✔	✔	✔	✘	✔
Tag configuration import/export	✔	✔	✘	✔	✘	✔
Integrated consent manager	✘	✘	✘	✔	✘	✘
Test and debug mode	✔	✔	✔	✔	✔	✔

*Snowplow does not have a tag management platform. All the tagging needs to be done via GTM tag template or JavaScript tracker library.

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Tag template library

A tag template is a standard piece of JavaScript code that either builds a tracking beacon/pixel or sets specific JavaScript variable values before invoking a tag vendor's code base, or library.
A collection of custom tags is called a Tag Library. Recurring tasks are handled more easily and reused across multiple applications to increase productivity.

Custom tags

The Custom HTML Tag type allows to deploy a tag that isn't yet supported via Tag Manager. This code will be provided by the tag vendor. Usually is used Sandboxed JavaScript for the code formatting.

Integrated consent manager

Consent management is a system or process for allowing customers to determine what personal data they are willing to share with a business. It has become so important worldwide because of the lawful requirement for websites to obtain user consent for collecting data through cookies while browsing. Some platforms have it integrated.

Build in variables

Variables in the Tag Manager are named placeholders for values that are populated when code is running on the website or mobile app. For example, the Tag Manager variable named "Page URL" returns the current web page URL.

Tag configuration import/export

Depending on the platform in which the tags are created, and their configuration, there are possibilities for them to be used in other platforms.

Test and debug mode

Testing is the process to find bugs and errors. Debugging is the process to correct the bugs found during testing. It is the process to identify the failure of implemented code.

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Data security

	Universal Analytics	Google Analytics 4	Matomo Cloud	Piwik PRO Core	Snowplow	Adobe Analytics
Full server redundancy	✓	✓	✓	✓	✓	✗
ISO 27001 certified data centres	✓	✓	✗	✓	✓	✓
SOC 2 certified data centres	✓	✓	✗	✓	✗	✓
SAML integration	Only with GSuite Enterprise	Only with GSuite Enterprise	✓	✓	✓	✓
GDPR compliance*	✗	✗	✓	✓	✓	✗
HIPAA compliance features	✗	✗	✗	✗	No available information	✗

*Due to cross-border data transfer, we consider all non-EU providers as not GDPR-compliant until a Trans-Atlantic Data Privacy agreement is reached.

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Full server redundancy

A redundant server is like having a spare tire for client network. It is essentially a duplicate of the client system – including lines of communication and network devices – that can act as business's main operating system if the primary server goes down for any reason.

ISO 27001 certified data centres

ISO 27001 (known as ISO/IEC 27001:2013) is an international standard outlining best practices for an information security management system (ISMS), which is a framework of policies and procedures that includes all legal, physical, and technical controls involved in an organization's information risk management processes.

SOC 2 certified data centres

The SOC 2 is a report that inspects and tests data center controls for adherence to a set of criteria called Trust Service Principles (TSP). TSPs are broken down into five categories – security, availability, processing integrity, confidentiality, and privacy.

SAML integration

SAML is an acronym used to describe the Security Assertion Markup Language (SAML). Its primary role in online security is that it enables you to access multiple web applications using one set of login credentials.

GDPR compliance

General Data Protection Regulation is an EU law that guards personal data of the citizens of European Union. It requires companies to clearly define their data privacy policies and make them easily accessible.

HIPAA compliance

Health Insurance Portability and Accountability Act is a federal law that sets standards for processing, storing and disclosing sensitive protected health information. It applies to all forms of protected health information – electronic, written or spoken.

Integrations

	Universal Analytics	Google Analytics 4	Matomo Cloud	Piwik PRO Core	Snowplow	Adobe Analytics
Google Search Console	✓	✓	✓	✓	✓	✓
Google Ads	✓	✓	✓	✓	No available information	✓
HubSpot	✓	✓	✗	✓	HubSpot	✓
Salesforce	✓	✓	✗	✗	✓	✓
Azure	✓	✓	✓	✗	✓	✓
Google Cloud Platform	✓	✓	✓	✗	✓	✓

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Google Search Console

Google Search Console is a free service offered by Google that helps to monitor, maintain, and troubleshoot the website's presence in Google Search results.

Google Ads

Google Ads is an online advertising platform developed by Google, where advertisers bid to display brief advertisements, service offerings, product listings, or videos to web users. It can place ads both in the results of search engines like Google Search and on non-search websites, mobile apps, and videos.

HubSpot

HubSpot is a cloud-based CRM designed to help align sales and marketing teams, foster sales enablement, boost ROI and optimize inbound marketing strategy to generate more, qualified leads.

Salesforce

Salesforce unites marketing, sales, commerce, service, and IT teams from anywhere with Customer 360 — one integrated CRM platform that powers entire suite of connected apps. With Customer 360, the client can focus his employees on what's important right now: stabilizing the business, reopening, and getting back to delivering exceptional customer experiences.

Azure

Azure is Microsoft's public cloud platform. Azure offers a large collection of services, which includes platform as a service (PaaS), infrastructure as a service (IaaS), and managed database service capabilities.
These services and resources include storing your data and transforming it, depending on your requirements.

Google Cloud Platform

Google Cloud Platform, offered by Google, is a suite of cloud computing services that runs on the same infrastructure that Google uses internally for its end-user products, such as Google Search, Gmail, Google Drive, and YouTube. The Google Cloud console provides a web-based, graphical user interface that you can use to manage your Google Cloud projects and resources.

General overview

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Rating legend:
- ★★★ Great
- ★★☆ Good
- ★★☆ Requires some work
- ☆☆☆ Non-existent

	Universal Analytics	Google Analytics 4	Matomo Cloud	Piwik PRO Core	Snowplow	Adobe Analytics
Data processing & connectivity	★★☆	★★☆	★★☆	★★★	★★★	★★★
Reporting features	★★☆	★★★	★★☆	★★★	☆☆☆	★★★
Tag manager	★★☆	★★☆	★★☆	★★★	★☆☆	★★☆
Data security	★☆☆	★☆☆	★★★	★★★	★★☆	★★☆
Integrations	★★★	★★★	★★☆	★★☆	★★★	★★★
Product capabilities	★★☆	★★☆	★★☆	★★☆	★★★	★★★
Price	**Free** (Up to 10 million hits per month)	**Free** (Additional costs for data transferring)	**Cost** depends on the amount of hits (19€ - 13900€/month)	**Free** (Up to 500K hits per month)	Cost depends on the amount of events (On average 250€/month)	Cost depends on the amount of hits (2500€ - 30000€/month)

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Data processing & connectivity

Snowplow is our preferred platform when it comes to data processing & connectivity as there is no data sampling or limit on retention. PII pseudonymization and IP anonymization is possible as well as access to raw data that let you do advanced analyses. **Adobe Analytics** and **Piwik PRO** are also great choices with a bit more limit on the retention. **GA4** has a free BigQuery export, while **Matomo** offers advanced data anonymization and no sampling.

Data security

Piwik PRO is our choice for its GDPR/HIPAA compliance and SOC 2 and ISO 270001 certified data centres. **Snowplow** is working on getting SOC 2 certified too. While these two focus on data security after collecting, **Matomo** is a great tool for limiting the type of information being collected. **GA4** is promised to remove IP-address storage and introduce more privacy-centered capabilities in the future.

Reporting features

All platforms score high on this one, but **Adobe Analytics** stands out with the number of custom dimensions that can be created and visualization capabilities. **Snowplow** does not have reporting option on its own, but it is possible to connect it to other destinations e.g. Tableau, Datastudio, Power BI. **Matomo** offers a more straight-forward and simple reporting with no possibility to apply secondary dimension for analysis. **Piwik PRO and GA4** are well comparable and offer insightful custom reports.

Tag manager

Piwik PRO is an absolute winner in tag manager capabilities with its integrated consent mode, zero cookie load and content personalization capabilities, followed by **Adobe Analytics.** Adobe Analytics does require technical support from development. If these features are not as important, then **UA/GA4** and **Matomo** are sufficient plus comparable with each other. **Snowplow** does not have a tag manager but offers space for customization for technically advanced users.

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Integrations

Snowplow and **Adobe Analytics** are preferred choice when large amount of different sources/destinations needed. There is limitless amount to choose from and sources can range from web to mobile to IoT. As for the destinations anything in the ranges of AWS and GCP. **GA4** is well-known for its integrations with other platforms, especially from Google products. **Piwik PRO and Matomo** are a bit more difficult to integrate with some platforms, such as Salesforce.

Product capabilities

For highest level of customization we might want to opt out for **Snowplow,** which allows live data streaming, reviewing and fixing bad/ historical data, management of whole infrastructure (from connections to destinations) and ownership of the entire data which might be enriched and cleaned (reprocessed) afterwards. High level of customization is possible with **Adobe Analytics** too, but requires support from development. For less technical approach, **Piwik PRO** is a great alternative with an existing tag management system. **Matomo** is a simple platform suitable for non-technical and privacy-cautious users. **GA4** offers an incomparable ecosystem with search and ads data, BigQuery export options and user-friendly interface.

Price

GA4 is a free platform, however its free services come from some sacrifice on the privacy side.
Piwik Pro offers multiple options - free and paid. Free option is for 500K actions per month, and the paid option depends on the amount of actions.
Matomo pricing ranges from 19€ to 13900€ per month, however it largely depends on the required cloud storage. If there are storage options on-site then Matomo can be used free of charge.
Snowplow pricing depends on the amount of events, and usually averages around 250€ per month.
Adobe Analytics is the most expensive platform and every out-of-the-box solution comes with a price tag. It is the most premium platform out of all options.

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	matomo	PIWIK PRO	Snowplow	Adobe Analytics
Pros	- Open source - Full data control - Cookieless tracking - Detailed explanation of the setting next to configuration	- Very comparable to GA - Full data control - Integration with Google Ads and Search Console - Data exploration - Tableau, Power BI, Google Data Studio	- -Limitless amount of connectors (sources) - Limitless amount of customization and enrichment on already collected data - Complete data ownership - Highest level of data security	- Very customizable with possibility to apply changes retroactively - Can have as many integrations as required - Part of the Adobe Marketing Cloud - Includes predictive marketing capabilities
Cons	- Limited integration with CRM platforms e.g. Salesforce - The debug mode does not meet expectations - Not the best UX/UI design - No deep-dive analysis is possible	- Limited integration with CRM platforms e.g. Salesforce - Cloud version is a paid service	- Highly technical - need to provide a JSON schema for all custom attributes - Need additional tool configuration for reporting/dashboarding - No tag manager (rely on custom templates and JS)	- Not a user friendly interface - Technical knowledge and dev support is required for setup - Limited online resources are available, no demo or free-trial - Premium price

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Our advice

PIWIK PRO

Generally Dept recommends Piwik PRO as the primary alternative to Google Analytics, as it is the best fit for many of the common use cases with its user interface and structure comparable to Google Analytics.i
It has an integrated tag manager and consent management platform, while being based in Europe and complying to the highest privacy standards.

Snowplow

At the same time if you are looking for a highly customizable own-built platform with full control over what is being measured, then Snowplow offers the highest flexibility. However, it does require extensive technical knowledge for implementation as it does not offer any tag management system or analytics suite.

Adobe Analytics

If you have Adobe specialists and sufficient developer capacity available, with the extensively customizable Adobe Analytics you can build an adaptive system with many integrations. It is also based in the US however, therefore might be subject to the same limitations as GA.

matomo

Matomo can offer an alternative for basic, small scale implementations requiring high privacy standards. It can be configured with limited technical knowledge as Matomo offers simple explanations next to each of the configurations.