



Matomo: Exploring cutting edge alternatives to Google Analytics: Things we learned along the way

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Michigan State University Libraries

Matomo

Exploring cutting edge
alternatives to Google
Analytics: Things we learned
along the way

Core Forum, Oct 2023

Jennifer Brandon & Sruthin Gaddam



Libraries
MICHIGAN STATE UNIVERSITY





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User Experience
Librarian

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Project Background

- MSU Library Website Migration
- Drupal 7 end of life Jan. 2025
- UX research identified areas for improvement
 - Usability, architecture, functionality, and more!

Exploratory Phase

Platform Criteria

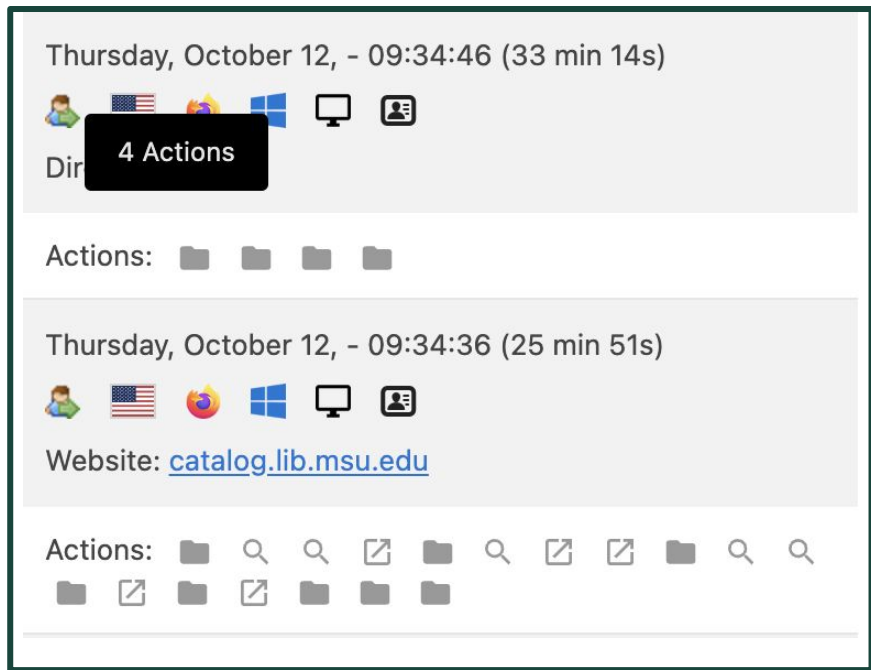
- Hosting
- Data Privacy
- Data Access
- Drupal Compatibility
- API & Pricing

Competitive Analysis

	A	B	C	D
1	Criteria	Matomo	Google Analytics	Notes
2	Provides visitor data in Real-time	Y	Y	
3	Provides information on visits per number of pages	Y	Y	
4	Provides information on visits per local time	Y	Y	
5	Provides information on number of visits per page changed over time	Y	Y	We can manually get the data from GA using
6	Provides information on returning visits overtime	Y	Y	GA->Audience->Behavior->New vs Returning

Competitive Analysis (Similarities)

- Real-time tracking
- Visits in real-time
- Page transitions
- Device information



Competitive Analysis (Differences)

- Pricing
 - [Cloud hosted](#) vs Self hosted
- User accounts
 - New vs Existing Google accounts
- Ease of installation and set-up

Competitive Analysis (GA4 vs Matomo)

- Event based model
- Incorporated AI
- Data loss during import
- Session based model
- No incorporated AI
- Robust data importing tools

Planning & Education

- Previously known as Piwiki
- Written in Python
- Installation using Docker
 - [Matomo Image](#)
 - [Source Code](#)
- Log Analytics

Planning & Education

- Tracking API
- Campaign Tracking
- Goal Setting

CMS Compatibility

- WordPress Plugin
 - WordPress REST API
- Drupal Module

Implementation Phase

Matomo














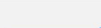






- Data ownership
- Complies with GDPR, HIPAA, CCPA
- Open-source
- Cookie-less tracking

Setting up Tracking

- Getting buy-in from the team and stakeholders
- Separate instances for development, staging, and production environments.

Setting up Tracking

All Websites dashboard (Total: 12 visits, 1,510 pageviews, 1,631 actions, 0 revenue)

WEBSITE	▼ VISITS	PAGEVIEWS	REVENUE	EVOLUTION	Visits ▾
Mainweb-gaddamsr 	6	169	\$0	⬆ 50%	
Sandhill-Test 	4	1,321	\$0	⬆ 33.3%	
Mainweb-test 	2	20	\$0	⬆ 100%	
Archive 	0	0	\$0	● 0%	
Catalog Devel 	0	0	\$0	● 0%	
intranet-gaddamsr 	0	0	\$0	● 0%	
LibGuides - test 	0	0	\$0	● 0%	
Sandhill-1-Devel 	0	0	\$0	● 0%	
Sandhill-Tone-Devel 	0	0	\$0	● 0%	
Sandhill-Tone-Test 	0	0	\$0	● 0%	

➕ Add a new website

1-10 of 10

Setting up Tracking

^ General settings

Matomo site ID *

The user account number is unique to the websites domain. Click the **Settings** link in your Matomo account, then the **Websites** tab and enter the appropriate site ID.

Matomo HTTP URL *

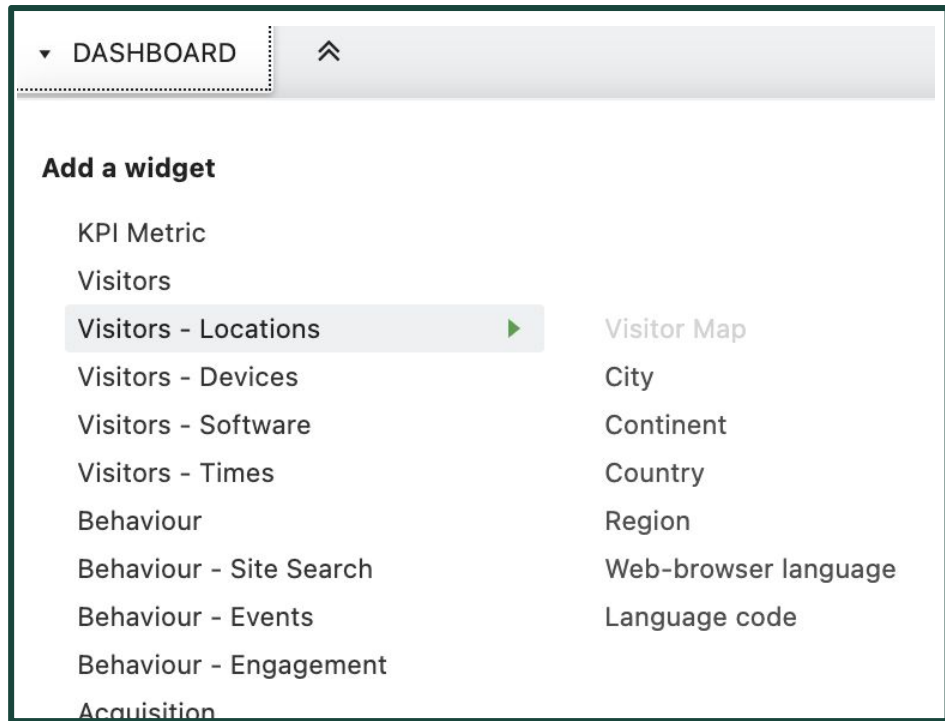
The URL to your Matomo base directory. Example: "http://www.example.com/matomo/".

Matomo HTTPS URL

The URL to your Matomo base directory with SSL certificate installed. Required if you track a SSL enabled website. Example: "https://www.example.com/matomo/".

Dashboard setup

- Adding Widgets
 - Several out of the box options
 - Can easily be added/removed
 - Can be exported



Custom Plugins

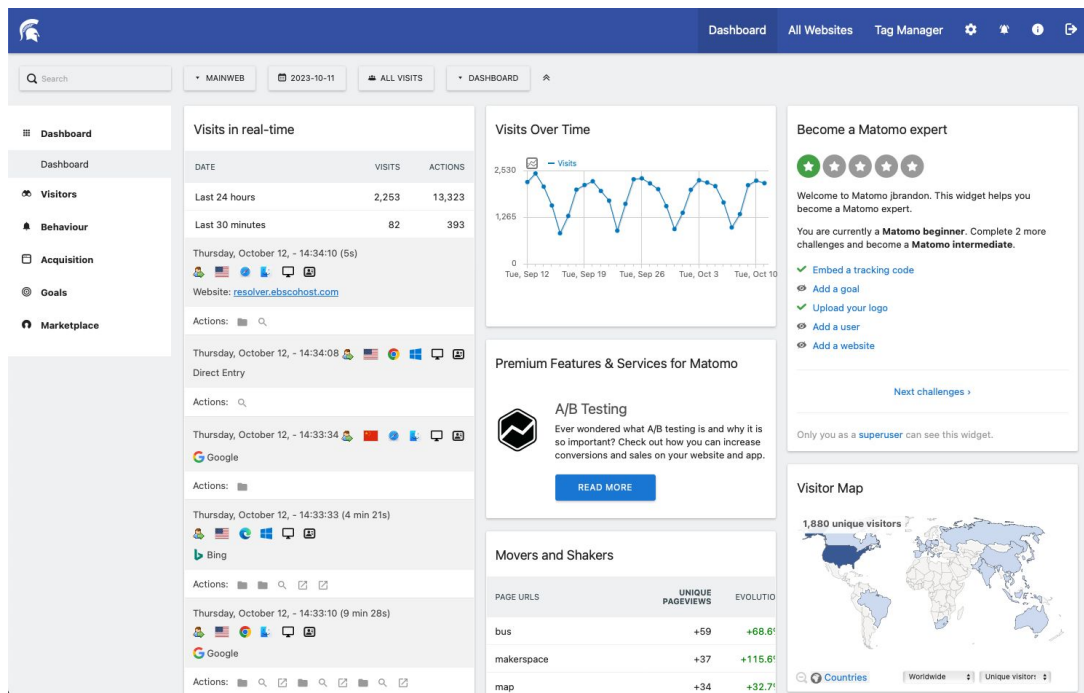
- Accessed within the web app
- Provides a UI for searching and filtering plugins
- Provides options to activate plugins after purchase

Custom Plugins

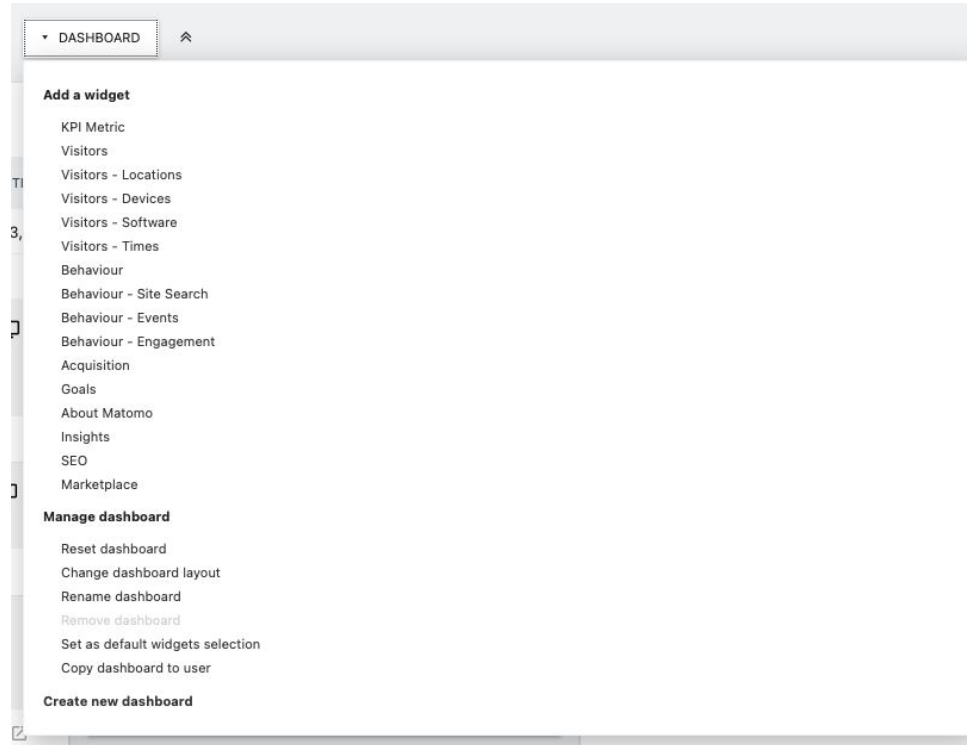
- Heatmaps & Session Recording
- Login LDAP
- A/B Testing
- Custom Reports

Usage

Dashboard




Dashboard Customization



Dashboard Layout Options

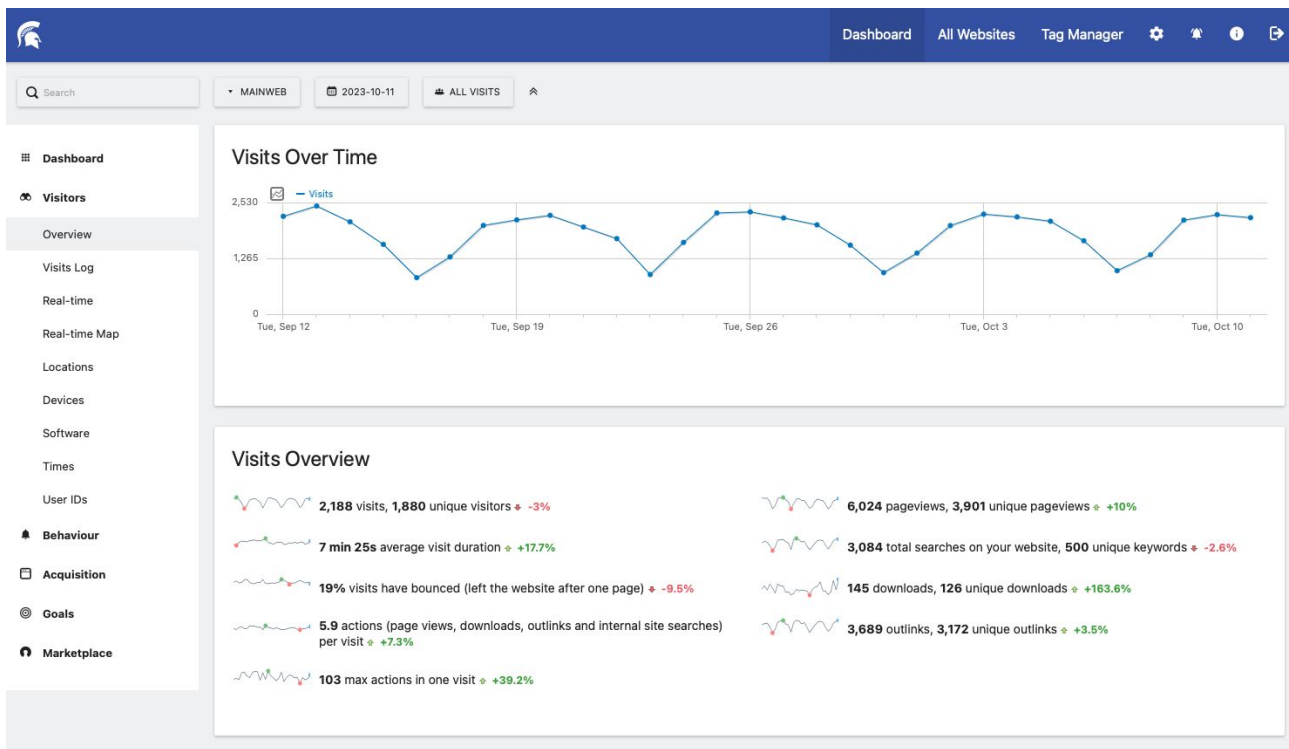


Please select your new dashboard layout

SAVE CANCEL

Visitors Overview



Visitor Reports

- Visits Log
- Real-time
- Real-time Map
- Locations
- Devices
- Software
- Times
- User IDS

Behavior

Dashboard

All Websites

Tag Manager

Search

MAINWEB

2023-10-12

ALL VISITS

Dashboard

Visitors

Behaviour

Pages

Entry pages

Exit pages

Page titles

Site Search

Outlinks

Downloads

Events

Contents

Engagement

Transitions

Performance

Acquisition

Goals

Marketplace

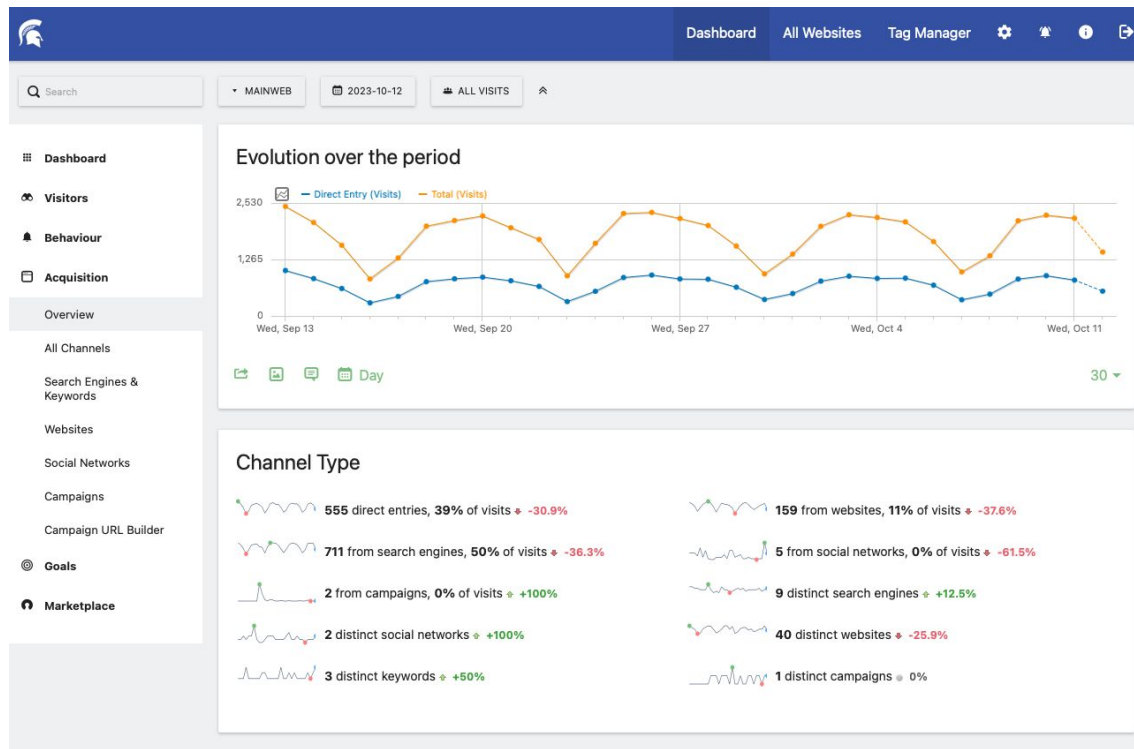
Pages

PAGE URL	PAGEVIEWS	UNIQUE PAGEVIEWS	BOUNCE RATE	AVG. TIME ON PAGE	EXIT RATE	AVG. PAGE LOAD TIME
/index	2,015	1,037	13%	00:01:36	37%	2.2s
map	204	107	45%	00:01:53	39%	2.79s
exhibits	143	103	35%	00:01:32	19%	1.68s
health	92	80	9%	00:00:45	49%	1.6s
/bus	85	57	6%	00:01:49	46%	1.87s
bus	63	51	0%	00:03:23	35%	3.48s
admin	65	49	0%	00:01:05	4%	0.74s
hours	39	35	25%	00:04:25	29%	1.63s
makerspace	43	35	29%	00:02:09	26%	1.26s
general	41	34	8%	00:02:41	21%	2.67s
spaces	32	29	50%	00:02:24	31%	1.1s
about	32	28	100%	00:02:12	57%	3.97s
staff	30	28	43%	00:02:47	50%	2.79s
/spaces	33	27	0%	00:00:56	15%	1.07s
dmc	38	27	50%	00:00:38	26%	1.32s
contact	33	26	67%	00:01:01	23%	1.53s
computers	27	23	0%	00:00:27	22%	1.18s

Behavior Reports

- Pages
- Entry pages
- Exit pages
- Page titles
- Site Search
- Outlinks
- Downloads
- Events
- Contents
- Engagement
- Transitions
- Performance

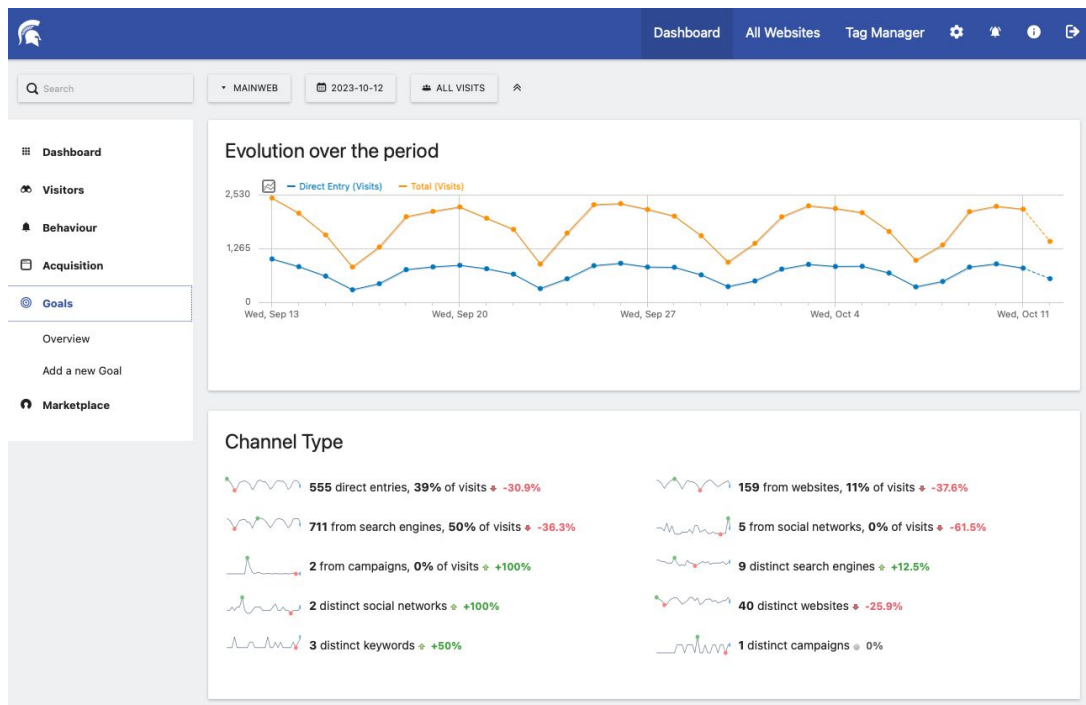
Acquisition



Acquisition Reports

- All Channels
- Search Engines & Keywords
- Websites
- Social Networks
- Campaigns
- Campaign URL Builder

Goals



Marketplace

“The Matomo Marketplace is an open Marketplace for Matomo plugins. It is a place where companies, developers and enthusiasts can freely share with everyone their Matomo plugins.”

<https://plugins.matomo.org>

Marketplace Premium Features

“Why Premium plugins? Researching, building, documenting, testing and maintaining quality products take years of experience and months of work. When you purchase a premium plugin you get a fully working product, with free updates for duration of license and you stay in full control of your analytics data.”

Demo

[https://analytics.
lib.msu.edu/](https://analytics.lib.msu.edu/)

More Info About Matomo

<https://matomo.org/help/>

Questions

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