

# Developer Guides

The developer guides show you how to use the public APIs, developer tools, and other developer features of the Frosmo Platform. These allow you to go beyond the Frosmo Control Panel when developing your Frosmo-enabled site, and to create your own client applications for interacting with the platform.

## Contents

- [APIs](#) for interacting with the platform:
  - [Getting your site origin](#) shows you how to find out the origin of a site.
  - [Graniitti API](#) provides access to the data in the Frosmo back end. You can use the API to retrieve, create, update, and delete data for your company.
  - [Visitor API](#) allows you to retrieve visitor affinity data from the Frosmo back end.
- [Connectors](#) for optionally integrating with the platform:
  - [React Connector](#) allows you to integrate your React application with the Frosmo Platform, after which you can manage the display rules and content for your components from the Frosmo Control Panel.
- [Data tracking](#) solutions for your site:
  - [Frosmo data layer](#) is a global JavaScript array that allows you to send data from a web page to the Frosmo back end. Use the data layer to collect product and visitor data from a site.
  - [Tracking products with the data layer](#) shows you how to collect product data from a site and count the number of views different products receive from visitors.
  - [Tracking transactions with the data layer](#) shows you how to monitor visitors for actions that qualify as transactions and collect data about those actions.
  - [Tracking conversions with the data layer](#) shows you how to monitor visitors for actions that qualify as conversions and collect data about those actions.
  - [Tracking custom actions with the data layer](#) shows you how to monitor visitors for actions and state changes that qualify as custom actions, and collect data about those actions and state changes.
  - [Tracking custom events with advanced tracking](#) shows you how to extend the basic tracking functionality of the platform by tracking modifications beyond clicks, displays, and true displays.
- [Recommendations](#) and related solutions for your site:
  - [Recommendation strategies](#) allow you to define the logic and settings for generating recommendation data.
  - [Recommendation configurations](#) allow you to define the logic and settings for generating recommendation data. Configurations are a legacy solution replaced by strategies.
  - [Recommendations API](#) allows you to retrieve recommendation data and visitor affinity profiles from the Frosmo back end.
  - [Product API](#) allows you to retrieve product data from the Frosmo back end.
  - [Recommendation examples](#) show you how to create recommendations from scratch.
- [Shared code](#) for writing JavaScript that is automatically executed on every page load or when triggered.

## Version history

Version	Publication date	Description
17.4	2022-12-08	Updated <a href="#">Recommendation configuration reference</a> . Updated the <a href="#">Graniitti API changelog</a> for API version 0.167.0.
17.3	2022-11-29	Updated the recommendations guide: <ul style="list-style-type: none"><li>• <a href="#">Retrieving recommendation data for strategies</a></li><li>• <a href="#">Recommendations API reference (strategies)</a></li></ul> Updated the <a href="#">Graniitti API changelog</a> for API version 0.165.0.
17.2	2022-11-07	Updated the <a href="#">Graniitti API changelog</a> for API version 0.157.0.
17.1	2022-11-02	Updated the <a href="#">Graniitti API changelog</a> for API version 0.156.0.
17.0	2022-10-31	Updated the documentation for the <a href="#">Frosmo Control Panel navigation redesign</a> .
16.3	2022-10-06	Updated the <a href="#">Graniitti API changelog</a> for API version 0.145.0.
16.2	2022-09-20	Updated <a href="#">Tracking products with the data layer</a> . Updated <a href="#">Recommendation configuration reference</a> .
16.1	2022-09-05	Updated the <a href="#">Graniitti API changelog</a> for API version 0.140.0.

16.0	2022-06-14	<p>Added <a href="#">Visitor API reference (affinity groups)</a>.</p> <p>Updated the following documentation to reflect the addition of affinity groups:</p> <ul style="list-style-type: none"> <li>• <a href="#">Graniitti API: Resources</a></li> <li>• <a href="#">Visitor API reference (affinity profiles)</a></li> </ul>
15.12	2022-06-14	Updated the <a href="#">Graniitti API changelog</a> for API version 0.134.1.
15.11	2022-06-07	Updated <a href="#">Creating and editing shared code</a> .
15.10	2022-05-04	<p>Updated the recommendations guide:</p> <ul style="list-style-type: none"> <li>• <a href="#">Retrieving recommendation data for strategies</a></li> <li>• <a href="#">Recommendations API reference (strategies)</a></li> </ul>
15.9	2022-04-29	Removed all documentation about target groups.
15.8	2022-04-28	Updated <a href="#">Example: Creating personalized content in React</a> .
15.7	2022-04-21	<p>Updated the following documentation to conform to the API changes introduced by <a href="#">maintenance release 2022-04-21</a>:</p> <ul style="list-style-type: none"> <li>• <a href="#">Visitor API reference (affinity profiles)</a></li> <li>• <a href="#">Recommendations API reference (strategies)</a></li> </ul>
15.6	2022-04-19	<p>Updated the following documentation to conform to the UI changes introduced by <a href="#">maintenance release 2022-04-19</a>:</p> <ul style="list-style-type: none"> <li>• <a href="#">Tracking data layer events</a></li> <li>• <a href="#">Example: Tracking products with shared code</a></li> </ul> <p>Updated the <a href="#">Graniitti API changelog</a> for API version 0.120.0.</p>
15.5	2022-04-07	Updated <a href="#">Recommendations API reference (strategies)</a> .
15.4	2022-03-24	<p>Updated <a href="#">Example: Creating personalized content in React</a>.</p> <p>Updated <a href="#">Recommendation configuration reference</a>.</p> <p>Updated the <a href="#">Graniitti API changelog</a> for API version 0.116.0.</p>
15.3	2022-03-18	<p>Updated <a href="#">Enabling and disabling the data layer</a>.</p> <p>Updated <a href="#">Tracking custom events with advanced tracking</a>.</p>
15.2	2022-03-16	Updated the <a href="#">Graniitti API changelog</a> for API version 0.114.0.
15.1	2022-03-10	Removed <b>Recommendations API reference (affinity profiles)</b> .
15.0	2022-03-07	<p>Added <a href="#">Visitor API</a>.</p> <p>Updated <b>Recommendations API reference (affinity profiles)</b>.</p>
14.15	2022-03-01	Updated the <a href="#">Graniitti API changelog</a> for API version 0.108.0.
14.14	2022-02-08	Updated <a href="#">Recommendations API reference (configurations)</a> .
14.13	2022-02-04	<p>Combined the API requests and responses pages into a single page by API and use case:</p> <ul style="list-style-type: none"> <li>• <a href="#">Recommendations API reference (strategies)</a></li> <li>• <b>Recommendations API reference (affinity profiles)</b></li> <li>• <a href="#">Recommendations API reference (configurations)</a></li> <li>• <a href="#">Product API reference</a></li> </ul>
14.12	2022-02-04	<p>Added the following API documentation:</p> <ul style="list-style-type: none"> <li>• <b>Recommendations API: Requests (affinity profiles)</b></li> <li>• <b>Recommendations API: Responses (affinity profiles)</b></li> </ul>
14.11	2022-01-24	<p>Updated <a href="#">Tracking products with the data layer</a>.</p> <p>Updated <a href="#">Recommendation configuration reference</a>.</p>

14.10	2022-01-18	<p>Updated <a href="#">Tracking products with the data layer</a>.</p> <p>Update the following API documentation:</p> <ul style="list-style-type: none"> <li>• <b>Recommendations API: Requests (strategies)</b></li> <li>• <b>Recommendations API: Responses (strategies)</b></li> <li>• <b>Product API: Requests</b></li> <li>• <b>Product API: Responses</b></li> </ul>
14.9	2022-01-03	Updated <a href="#">Tracking products with the data layer</a> .
14.8	2021-12-07	<p>Update the following API documentation:</p> <ul style="list-style-type: none"> <li>• <b>Recommendations API: Requests (strategies)</b></li> <li>• <b>Recommendations API: Requests (configurations)</b></li> <li>• <b>Product API: Requests</b></li> </ul>
14.7	2021-11-30	<p>Updated the data tracking documentation:</p> <ul style="list-style-type: none"> <li>• <a href="#">Tracking products with the data layer</a></li> <li>• <a href="#">Tracking transactions with the data layer</a></li> <li>• <a href="#">Tracking conversions with the data layer</a></li> <li>• <a href="#">Tracking custom actions with the data layer</a></li> </ul>
14.6	2021-11-09	Updated the <a href="#">Graniitti API changelog</a> for API versions 0.83.0 and 0.83.1.
14.5	2021-11-04	<p>Updated the recommendations guide:</p> <ul style="list-style-type: none"> <li>• <b>Recommendations API: Requests (strategies)</b></li> <li>• <b>Recommendations API: Responses (strategies)</b></li> <li>• <a href="#">Example: Recommending trending products in a category (strategy)</a></li> </ul>
14.4	2021-10-11	<p>Updated <a href="#">Graniitti API: Responses</a>.</p> <p>Updated <a href="#">Recommendation configuration reference</a>.</p>
14.3	2021-09-20	Updated <a href="#">Creating and editing shared code</a> .
14.2	2021-09-06	Updated the <a href="#">Graniitti API changelog</a> for API version 0.75.0.
14.1	2021-08-27	Updated <b>Recommendations API: Requests (strategies)</b> .
14.0	2021-08-17	Moved feature introductions to <a href="#">Platform &amp; Features</a> , and restructured the guides to reflect the move.
13.0	2021-07-12	Restructured and updated the <a href="#">data tracking guide</a> to reflect similar updates elsewhere in the documentation portal.
12.1	2021-07-06	<p>Updated the recommendations guide:</p> <ul style="list-style-type: none"> <li>• <a href="#">Retrieving recommendation data for strategies</a></li> <li>• <b>Recommendations API: Requests (strategies)</b></li> </ul>
12.0	2021-07-01	<p>Added the following documentation to the recommendations guide:</p> <ul style="list-style-type: none"> <li>• <b>Recommendations API: Requests (strategies)</b></li> <li>• <b>Recommendations API: Responses (strategies)</b></li> </ul> <p>Updated the following documentation in the recommendations guide:</p> <ul style="list-style-type: none"> <li>• <a href="#">Retrieving recommendation data for strategies</a></li> <li>• <b>Recommendations API: Requests (configurations)</b></li> <li>• <b>Recommendations API: Responses (configurations)</b></li> </ul>
11.5	2021-06-30	<p>Updated <a href="#">Tracking products with the data layer</a>.</p> <p>Updated <b>Product API: Responses</b>.</p>
11.4	2021-05-31	<p>Updated <a href="#">Recommendation configuration reference</a>.</p> <p>Updated the <a href="#">Graniitti API changelog</a> for API version 0.69.3.</p>
11.3	2021-05-26	Site maintenance updates.

11.2	2021-05-03	Updated <a href="#">Managing Graniitti API results</a> . Updated the <a href="#">Graniitti API changelog</a> for API version 0.67.0.
11.1	2021-04-12	Updated the <a href="#">Graniitti API changelog</a> for API version 0.66.0.
11.0	2021-03-18	Removed <b>FProxy</b> .
10.0	2021-03-08	Updated the recommendations guide: <ul style="list-style-type: none"> <li>• <a href="#">Recommendation strategies</a></li> <li>• <a href="#">Recommendation configuration reference</a></li> <li>• <a href="#">Example: Recommending trending products in a category (strategy)</a></li> </ul> Updated the <a href="#">Graniitti API changelog</a> for API version 0.64.0.
9.4	2021-03-01	Updated the <a href="#">Graniitti API changelog</a> for API version 0.63.0.
9.3	2021-02-10	Updated the <a href="#">Graniitti API changelog</a> for API version 0.61.0.
9.2	2021-01-13	Updated the <a href="#">Graniitti API changelog</a> for API version 0.59.0.
9.1	2020-12-07	Updated <a href="#">Graniitti API: Resources</a> . Updated <a href="#">Tracking transactions with the data layer</a> . Updated the <a href="#">Graniitti API changelog</a> for API version 0.57.0.
9.0	2020-11-05	Consolidated and updated the recommendations documentation into the <a href="#">recommendations developer guide</a> .
8.3	2020-11-02	Restructured the following API documentation: <ul style="list-style-type: none"> <li>• <a href="#">Getting your site origin</a></li> <li>• <a href="#">Graniitti API</a></li> </ul>
8.2	2020-09-21	Updated <b>Graniitti API and recommendations</b> . Updated <a href="#">Tracking products with the data layer</a> . Updated the <a href="#">Graniitti API changelog</a> for API version 0.55.0.
8.1	2020-09-09	Updated the <a href="#">Graniitti API changelog</a> for API version 0.54.0.
8.0	2020-07-31	Added the following data tracking documentation: <ul style="list-style-type: none"> <li>• <a href="#">Tracking conversions with the data layer</a></li> <li>• <a href="#">Tracking custom actions with the data layer</a></li> <li>• <a href="#">Tracking products with the data layer</a></li> <li>• <a href="#">Tracking transactions with the data layer</a></li> </ul> Restructured and updated the data layer guide to align with the new data tracking documentation: <ul style="list-style-type: none"> <li>• <a href="#">Frosmo data layer</a></li> <li>• <a href="#">Tracking data with the data layer</a></li> <li>• <a href="#">Tracking data layer events</a></li> </ul>
7.9	2020-07-06	Updated the <a href="#">Graniitti API changelog</a> for API version 0.53.0.
7.8	2020-06-22	Updated the <a href="#">Graniitti API changelog</a> for API version 0.52.4.
7.7	2020-06-15	Updated the <a href="#">Graniitti API changelog</a> for API version 0.52.1.
7.6	2020-05-25	Updated the Graniitti API guide: <ul style="list-style-type: none"> <li>• <a href="#">Graniitti API: Resources</a></li> <li>• <a href="#">Graniitti API authentication</a></li> </ul> Updated the <a href="#">Graniitti API changelog</a> for API version 0.49.0.
7.5	2020-05-05	Updated the shared code guide: <ul style="list-style-type: none"> <li>• <b>Working with shared code</b></li> <li>• <a href="#">Creating and editing shared code</a></li> <li>• <a href="#">Activating and deactivating shared code</a></li> <li>• <a href="#">Troubleshooting shared code</a></li> <li>• <a href="#">Example: Tracking products with shared code</a></li> </ul>

7.4	2020-04-27	Updated the <a href="#">Graniitti API changelog</a> for API version 0.48.0.
7.3	2020-04-21	Updated the FProxy guide: <ul style="list-style-type: none"> <li>• <b>Starting and stopping the FProxy server</b></li> <li>• <b>Developing modification content with FProxy</b></li> <li>• <b>FProxy CLI commands and parameters</b></li> </ul>
7.2	2020-04-14	Updated the <a href="#">Graniitti API changelog</a> for API version 0.46.3.
7.1	2020-04-01	Removed <b>Frosmo Debugger</b> . The tool continues its life as <a href="#">Frosmo Preview</a> . Updated the FProxy guide to reference Frosmo Preview: <ul style="list-style-type: none"> <li>• <b>Introduction to modification development</b></li> <li>• <b>Starting and stopping the FProxy server</b></li> <li>• <b>Developing modification content with FProxy</b></li> <li>• <b>Example: Creating a simple site banner with FProxy</b></li> <li>• <b>Troubleshooting FProxy</b></li> </ul>
7.0	2020-03-31	Added <a href="#">Shared code</a> .
6.17	2020-03-16	Updated the <a href="#">Graniitti API changelog</a> for API version 0.46.0.
6.16	2020-03-02	Updated the <a href="#">Graniitti API changelog</a> for API version 0.45.2. Removed entries for Frosmo-internal releases from the <a href="#">Graniitti API changelog</a> .
6.15	2020-02-18	Updated the <a href="#">Graniitti API changelog</a> for API version 0.45.1.
6.14	2020-02-17	Updated the <a href="#">Graniitti API changelog</a> for API version 0.45.0.
6.13	2020-02-07	Updated the <a href="#">Graniitti API changelog</a> for API version 0.44.10.
6.12	2020-01-27	Updated the <a href="#">Graniitti API changelog</a> for API version 0.44.8.
6.11	2019-12-09	Updated the <a href="#">Graniitti API changelog</a> for API version 0.44.5.
6.10	2019-12-03	Updated the <a href="#">Graniitti API changelog</a> for API version 0.44.4.
6.9	2019-11-26	Updated the <a href="#">Graniitti API changelog</a> for API version 0.44.3.
6.8	2019-11-20	Updated modification-related documentation to conform to the new modification UI introduced in the <a href="#">Happy Valley</a> release.
6.7	2019-11-15	Updated the <a href="#">Graniitti API changelog</a> for API version 0.44.1.
6.6	2019-11-08	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.21.
6.5	2019-11-01	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.20.
6.4	2019-10-25	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.19.
6.3	2019-10-11	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.18.
6.2	2019-10-04	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.17.
6.1	2019-09-20	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.16.
6.0	2019-09-16	Added the <a href="#">React Connector guide</a> .
5.19	2019-09-11	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.15.
5.18	2019-09-06	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.14.
5.17	2019-09-04	Updated the FProxy guide: <ul style="list-style-type: none"> <li>• <b>FProxy</b></li> <li>• <b>Configuring FProxy</b></li> </ul>
5.16	2019-08-29	Updated the recommendations documentation: <ul style="list-style-type: none"> <li>• <b>Graniitti API and recommendations</b></li> <li>• <b>Recommendations API v2</b></li> </ul> Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.13.

5.15	2019-07-31	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.12.
5.14	2019-06-28	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.10.
5.13	2019-06-14	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.8.
5.12	2019-06-03	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.5.
5.11	2019-05-17	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.2.
5.10	2019-05-06	Moved the <b>Recommendations</b> guide to <a href="#">User Guides</a> .
5.9	2019-05-02	Updated the <a href="#">Graniitti API changelog</a> for API version 0.43.0.
5.8	2019-04-05	Updated the recommendations documentation for Recommendations API v2: <ul style="list-style-type: none"> <li>• <a href="#">Recommendations API</a></li> <li>• <b>Recommendations API v2</b></li> <li>• <b>Migrating to a new Recommendations API version</b></li> <li>• <b>Creating recommendations</b></li> <li>• <b>Retrieving recommendation data</b></li> </ul> Updated <b>Collecting data with the data layer</b> . Updated the <a href="#">Graniitti API changelog</a> for API version 0.42.3.
5.7	2019-03-11	Updated the FProxy guide: <ul style="list-style-type: none"> <li>• <b>FProxy</b></li> <li>• <b>Introduction to modification development</b></li> <li>• <b>Installing and uninstalling FProxy</b></li> <li>• <b>Configuring FProxy</b></li> <li>• <b>Starting and stopping the FProxy server</b></li> <li>• <b>Developing modification content with FProxy</b></li> <li>• <b>FProxy CLI commands and parameters</b></li> </ul>
5.6	2019-03-08	Restructured and updated the data layer guide: <ul style="list-style-type: none"> <li>• <a href="#">Frosmo data layer</a></li> <li>• <b>Collecting data with the data layer</b></li> <li>• <b>Tracking conversions and transactions with the data layer</b></li> <li>• <b>Tracking custom actions with the data layer</b></li> <li>• <b>Tracking products with the data layer</b></li> </ul> Updated the <a href="#">Graniitti API changelog</a> for API version 0.42.2.
5.5	2019-01-31	Updated the recommendations documentation: <ul style="list-style-type: none"> <li>• <b>Introduction to recommendations</b></li> <li>• <b>Creating recommendations</b></li> <li>• <b>Retrieving recommendation data</b></li> <li>• <b>Example: Recommending products purchased together</b> (including child topics)</li> </ul> Updated the following API documentation: <ul style="list-style-type: none"> <li>• <b>Graniitti API and recommendations</b></li> <li>• <a href="#">Product API</a></li> <li>• <a href="#">Recommendations API</a></li> </ul>
5.4	2019-01-18	Added <a href="#">Example: Recommending products purchased together (configuration)</a> .
5.3	2019-01-11	Updated the <a href="#">Graniitti API changelog</a> for API version 0.42.1.
5.2	2019-01-09	Site maintenance updates.
5.1	2018-12-10	Updated the Graniitti API guide: <ul style="list-style-type: none"> <li>• <a href="#">Getting started with the Graniitti API</a></li> <li>• <a href="#">Graniitti API: Resources</a></li> <li>• <a href="#">Graniitti API authentication</a></li> <li>• <a href="#">Graniitti API: Requests</a></li> <li>• <a href="#">Graniitti API: Responses</a></li> </ul>

5.0	2018-12-03	<p>Added the following documentation on the Frosmo Recommendations system:</p> <ul style="list-style-type: none"> <li>• <b>Graniitti API and recommendations</b> (Graniitti API reference)</li> <li>• <a href="#">Product API</a></li> <li>• <b>Recommendations</b> (guide)</li> <li>• <a href="#">Recommendations API</a></li> </ul>
4.0	2018-12-02	<p>Restructured and consolidated the documentation for better usability by grouping the guides under the following new main topics:</p> <ul style="list-style-type: none"> <li>• <a href="#">APIs</a></li> <li>• <a href="#">Data tracking</a></li> <li>• <b>Tools</b></li> </ul>
3.5	2018-11-28	Updated the <a href="#">Graniitti API changelog</a> for API versions 0.41.5 and 0.42.0.
3.4	2018-10-15	Updated the <a href="#">Graniitti API changelog</a> for API version 0.41.4.
3.3	2018-10-01	<p>Updated <a href="#">Frosmo data layer</a>.</p> <p>Updated the Graniitti API guide:</p> <ul style="list-style-type: none"> <li>• <a href="#">Getting started with the Graniitti API</a></li> <li>• <a href="#">Graniitti API: Requests</a></li> <li>• <a href="#">Graniitti API reference</a></li> <li>• <a href="#">Graniitti API changelog</a> for API version 0.41.3</li> </ul>
3.2	2018-09-13	<p>Updated <a href="#">Tracking custom events with advanced tracking</a>.</p> <p>Removed the <b>Downloads</b> page and the standalone PDFs.</p>
3.1	2018-09-05	Updated the <a href="#">Graniitti API changelog</a> for API versions 0.41.1 and 0.41.2.
3.0	2018-09-03	<p>Added <b>FProxy</b>.</p> <p>Added <b>Frosmo Debugger</b>.</p> <p>Added <a href="#">Graniitti API</a>.</p>
2.0	2018-03-14	Added <a href="#">Tracking custom events with advanced tracking</a> .
1.2	2017-11-29	Updated <a href="#">Frosmo data layer</a> .
1.1	2017-10-23	Moved the standalone PDFs from the front page to the <b>Downloads</b> page.
1.0	2017-08-17	First public version of this documentation.