# Open Measurement SDK: Capabilities and Limitations

The Open Measurement software development kit (OM SDK) enables third-party ad measurement services to collect signals regarding ad impressions and performance. These signals are sent by the Open Measurement Interface Definition (OMID) API.

**Components:** The OM SDK includes both native libraries and JavaScript.

- **OM SDK Native Libraries:** platform specific libraries for either iOS or Android. Implemented natively on the device for collecting and publishing viewability signals that support viewable impressions as defined by MRC.

- **OM SDK JavaScript:** JavaScript libraries used to implement OMID API. Includes details for building an adapter that listens to signals provided by the OM SDK. Using the provided JS libraries provided in the OM SDK, the OMID API should be universal across iOS, Android, and Web browsers. Additional platform support is planned for future iterations.

Publisher Implementation
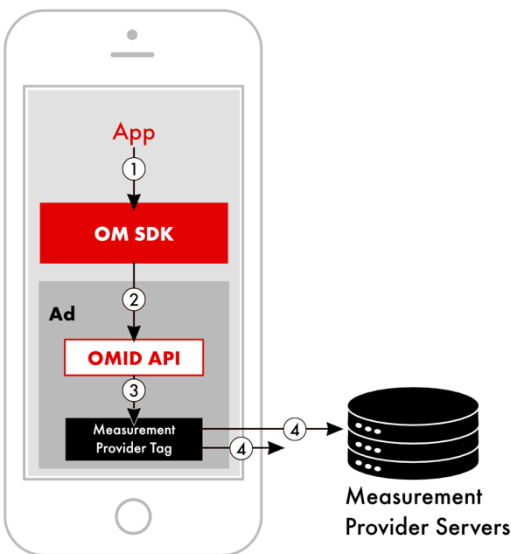
1. Publisher app notifies OM SDK that an ad session has started.
2. OM SDK creates an OMID API associated with the ad.
3. OM SDK JavaScript injects measurement provider tag into the ad.
4. Measurement provider tag sends impression signal to servers. Subsequent events and viewability data are reported the same way.

Ad Network Implementation
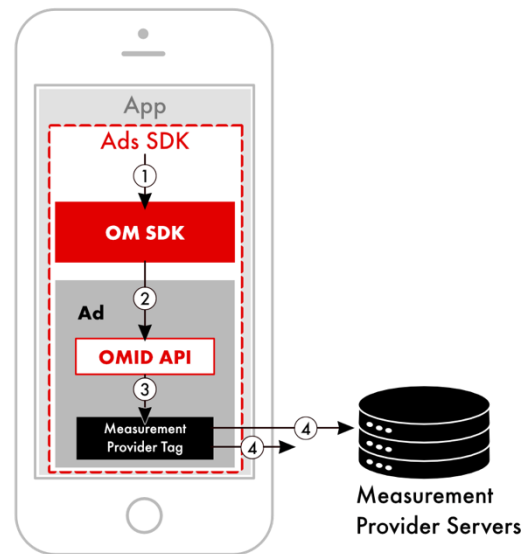
1. Ad network implements Ads SDK that notifies OM SDK that an ad session has started.
2. OM SDK creates an OMID API associated with the ad.
3. OM SDK JavaScript injects measurement provider tag into the ad.
4. Measurement provider tag sends impression signal to servers. Subsequent events and viewability data are reported the same way.

Video and Platform Support

OM SDK video is supported in-app, whether it's delivered in a video player or as part of the creative for a display ad. OM SDK can be delivered and implemented using the IAB Video Ad-Serving Template (VAST), but VAST is only designed to serve video content in the context of a video platform.

Video and platform technology supported in OM SDK is described in the following table.

Technology	Mobile In-App Display	Mobile In-App Video
Webview	✔	✔
Native	✔	✔
iOS	✔	✔
Android	✔	✔
VAST 2.0	Not Supported	✔
VAST 3.0	Not Supported	✔
VAST 4.0	Not Supported	✔
VAST 4.1	Not Supported	✔
VPAID	Not Supported	Not Supported

OM SDK Limitations

While OM SDK facilitates features like brand safety and fraud detection, logic for execution is not built-in. The limited support for these features is listed below.

- **Brand Safety:** Performed by Measurement Provider tag. No logic in OM SDK.
- **Fraud Detection:** Performed by Measurement Provider tag. No logic in OM SDK.
- **Advertising ID:** No retrieval logic using OM SDK.

MEASUREMENTS REPORTED (OM SDK v.1.3)

Ad Session information

Measurements reported for the ad session identify details for session start, finish, and any errors that occur. Items marked with an asterisks (*) are new in version 1.3.

- **sessionStart:** apiVersion, environment, accessMode, videoElement, slotElement, adSessionType, adServingId, transactionId, podSequence, adCount, omidNativeinfo - partnerName, partnerVersion; omidJSInfo - omidImplementer, serviceVersion, sessionClientVersion, partnerName, partnerVersion; app - libraryVersion, appID, deviceInfo- deviceType, os, osVersion; supports, customReferenceData, creativeType*, mediaType*, impressionType*, supportsLoadedEvent*, contentURL*

- **sessionError:** errorType, message

- **sessionFinish**

- **loaded:** creativeType, mediaType, impressionType

- **impression:** creativeType, mediaType, impressionType, mediaEventAdaptorType, mediaEventAdaptorVersion, viewport width and height, adView,

User Interactions

Measurements reported for user interactions include metrics for direct interactions, like clicks, and view dimension changes.

- **adUserInteraction:** click, invitationAccept

- **geometryChange:** percentageInView, geometry,onScreenGeometry, measuringElement containerGeometry, onScreenContainerGeometry, viewport width and height, adView, reasons, pixel, friendlyObstructions, declaredFriendlyObstructions

Video and Audio Ad Lifecycle

Measurements reported for the video or audio ad lifecycle include metrics track media player and ad events.

- **Media Player State:** Minimized, Collapsed, Normal, Expanded, Fullscreen

- **Media Interaction Types:** Click, Invitation Accepted

- **Media Events:** start, first Quartile, midpoint, thirdQuartle, complete, pause, resume, bufferStart, bufferFinish, skipped, volumeChange, playerStateChange, adUserInteraction