

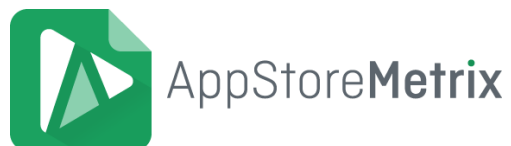
Case Study

How To Visualize App Reporting Data Easily With AppStoreMetrix & Google Data Studio

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1 Overview

The reference customer is an app publisher that is running a mobile app with In-App Sales at Google Play Store and Apple App Store. With more than 150,000 monthly transactions on both platforms the need for an automatic reporting solution is quite reasonable, not just to give further insights on app analytics by providing proper data visualizations. The main goal was to create a stable workflow that eases the preparation of big data sets and minimizes the amount of work.

As most app publishers can tell an automatic comparison of Google Play and iTunes Connect reporting data is quite tough to set up. Using online based solutions such as

the Google Sheets add-on AppStoreMetrix and Google Data Studio it is possible to create a stable workflow that includes all necessary key metrics:

1. total in-app sales units on a daily basis
2. total sales by currency
3. transactions per country in total and percentage
4. integrate a detailed report for iTunes Connect data

The dashboard below provides insightful visualizations and turned out to be time-saving by minimizing the amount of manual work from half a day to about half an hour per month.

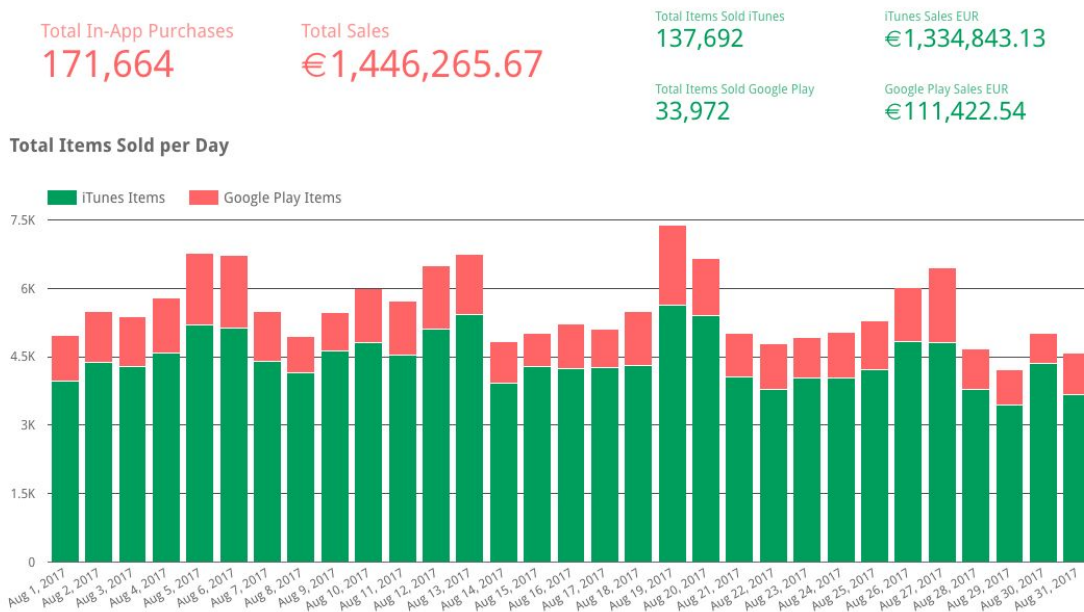
1.1 iTunes Connect and Google Play In App Sales Dashboard



AppStoreMetrix

iTunes and Google Play In App Sales Dashboard

Sales Data Overview - Total Items Sold | Sales Data

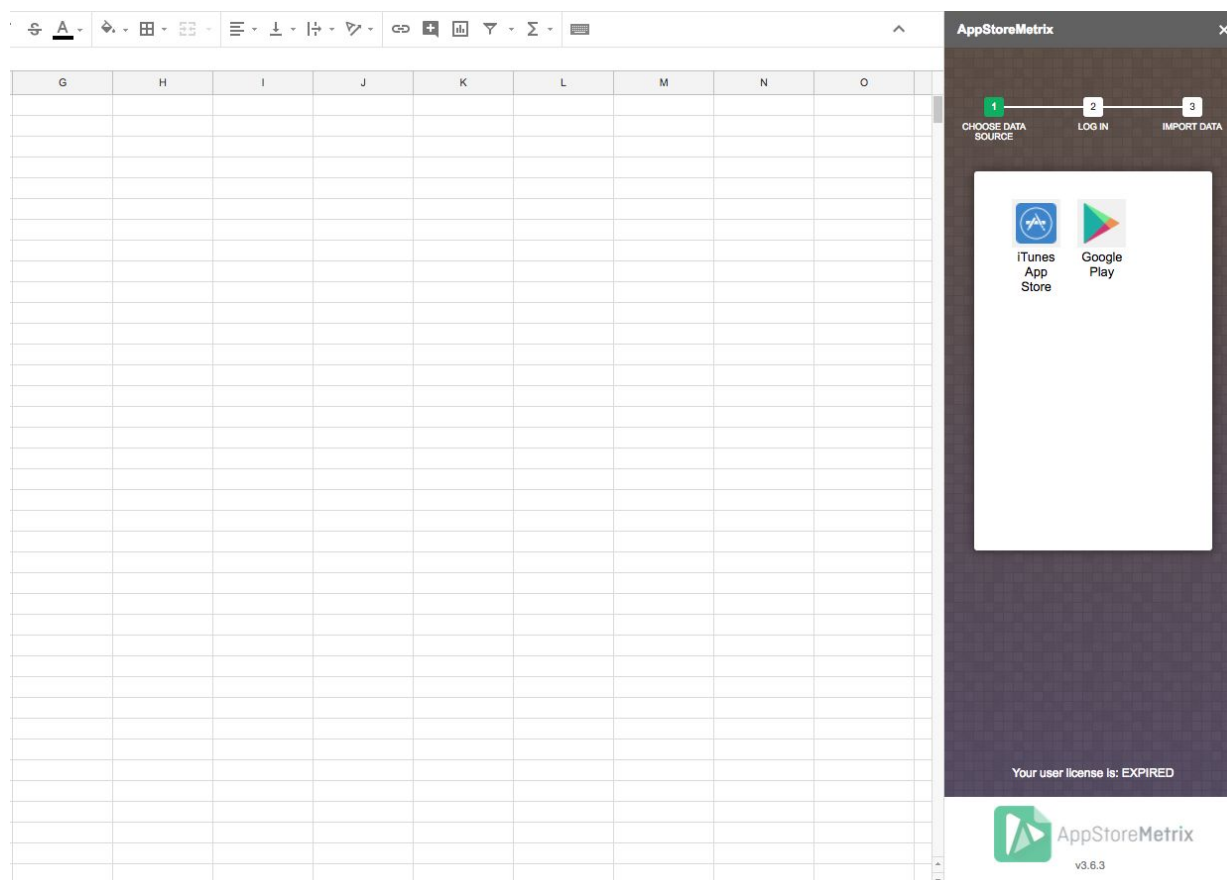


AppStoreMetrix

2 Connect App Store Reporting Data With Google Sheets

To connect the app reporting data of both app stores with Google Spreadsheets we set up a scheduled data import of both platforms using AppStoreMetrix. This Google sheets add-on provides an interface that connects reporting data from both platforms with Google Spreadsheets with a few clicks. Based on the iTunes Connect access token and the Google Play bucket ID the add-on lets you pull data automatically into Google sheets on a daily, weekly, monthly or yearly basis.

!!! To set up the connection just have your iTunes Connect access token and Google Play bucket id ready and follow the instructions described in the AppStoreMetrix help section: <https://appstoremetrix.com/help/> or watch the latest video tutorial on YouTube: <https://www.youtube.com/watch?v=Za-7J-Au0D4> !!!



3 Harmonize iTunes Connect With Google Play Data

The comparison of Google Play and iTunes Connect reporting data is challenging due to the differently structured report files. While monthly sales reports of Google Play show pure sales data for each date with one row for each in-app transaction, the iTunes Connect Summary Sales Report contains all transactions such as free and paid downloads, in-app sales or subscriptions for the whole period aggregated by the interval you select (e.g. daily, weekly, monthly).

To merge data within the dashboard it is necessary to set up four harmonization sheets:

1. Items Sold
2. iTunes Pricing
3. Sales per Currency
4. Sales per Country

	A	B	C	D	E	F	G	H	I	J	K	L
1	Order Numb	Order Charg	Order Charg	Financial St	Device Mode	Product Title	Product ID	Product Typ	SKU ID	Currency of	Item Price	Taxes Collec
2		2017-08-01		Charged	HWMozart			inapp		EUR	1.5	0.29
3		2017-08-01		Charged	gtaxlwifi			inapp		EUR	1.92	0.37
4		2017-08-01		Charged	gtaxlwifi			inapp		EUR	0.83	0.16
5		2017-08-01		Charged	v2wifi			inapp		EUR	1.67	0.32
6		2017-08-01		Charged	v2wifi			inapp		EUR	1.67	0.32
7		2017-08-01		Charged	v2wifi			inapp		EUR	1.67	0.32
8		2017-08-01		Charged	v2wifi			inapp		EUR	1.67	0.32
9		2017-08-01		Charged	v2wifi			inapp		EUR	1.67	0.32
10		2017-08-01		Charged	v2wifi			inapp		EUR	1.67	0.32
11		2017-08-01		Charged	mango			inapp		EUR	0.75	0.14
12		2017-08-01		Charged	j5nlte			inapp		EUR	0.83	0.16
13		2017-08-01		Charged	LIFETAB_S785X			inapp		EUR	0.67	0.13
14		2017-08-01		Charged	s3ve3g			inapp		EUR	0.83	0.16
15		2017-08-01		Charged	gts210velte			inapp		EUR	1.67	0.32
16		2017-08-01		Charged	gts210velte			inapp		EUR	0.83	0.16
17		2017-08-01		Charged	acer_jetfirehd			inapp		EUR	0.83	0.16
18		2017-08-01		Charged	dream2lte			inapp		EUR	3.35	0.64
19		2017-08-01		Charged	tolino89			inapp		EUR	0.67	0.13
20		2017-08-01		Charged	acer_jetfirehd			inapp		EUR	3.35	0.64
21		2017-08-01		Charged	htc_ocnuhl			inapp		EUR	3.35	0.64
22		2017-08-01		Charged	gtaxllte			inapp		EUR	0.83	0.16
23		2017-08-01		Charged	acer_jetfirehd			inapp		EUR	2.51	0.48
24		2017-08-01		Charged	j5nlte			inapp		EUR	5.03	0.96
25		2017-08-01		Charged	gt510lte			inapp		EUR	0.75	0.14
26		2017-08-01		Charged	F3311			inapp		EUR	0.83	0.16
27		2017-08-01		Charged	TERRA_PAD_1004			inapp		EUR	0.67	0.13
28		2017-08-01		Charged	gt510lte			inapp		EUR	0.83	0.16
29		2017-08-01		Charged	SGP511			inapp		EUR	2.51	0.48
30		2017-08-01		Charged	gt510wifi			inapp		EUR	0.67	0.13
31		2017-08-01		Charged	chagallwifi			inapp		EUR	3.35	0.64
32		2017-08-01		Charged	gts28vewifi			inapp		CHF	4.03	0.32
33		2017-08-01		Charged	chagallwifi			inapp		CHF	0.92	0.07
34		2017-08-01		Charged	gt510wifi			inapp		EUR	4.16	0.83
35		2017-08-01		Charged	gtaxlwifi			inapp		EUR	1.92	0.37
36		2017-08-01		Charged	gts210wifi			inapp		EUR	2.51	0.48
37		2017-08-01		Charged	matisssewifi			inapp		EUR	0.67	0.13
38		2017-08-01		Charged	SGP311			inapp		EUR	0.67	0.13

Quotes are not sourced from all markets and may be delayed up to 20 minutes. Information is provided 'as is' and solely for informational purposes, not for trading purposes or advice. [Disclaimer](#)

+ ≡
Google Play - salesreport
Import Data Sales Summary
iTunes Pricing
Items Sold
Sales per Currency
Items per Country

Although Google Data Studio eases the process by providing various calculation and filter functions it is not yet possible to merge several sheets within a single chart.

3.1 Total Items Sold

To provide an overview for all in-app sales on a daily basis the first step is to set up a daily scheduled import for iTunes Connect data with AppStoreMetrix to guarantee that the transactions will be assigned to a specific date. For further harmonization we've created the sheet "Items Sold" that basically sums all iTunes and Google data from the import sheets by date by using the sum and sumif functions.

	A	B	C	D	E	F	G	H	I	J	K
1	iTunes Date	iTunes Items	Google Date	Google Play Items							
2	08/01/2017	3742	2017-08-01	996							
3	08/02/2017	4440	2017-08-02	1116							
4	08/03/2017	4366	2017-08-03	1092							
5	08/04/2017	4370	2017-08-04	1200							
6	08/05/2017	5062	2017-08-05	1572							
7	08/06/2017	5509	2017-08-06	1596							
8	08/07/2017	4231	2017-08-07	1104							
9	08/08/2017	4038	2017-08-08	804							
10	08/09/2017	4505	2017-08-09	828							
11	08/10/2017	4532	2017-08-10	1188							
12	08/11/2017	4819	2017-08-11	1188							
13	08/12/2017	5187	2017-08-12	1380							
14	08/13/2017	5369	2017-08-13	1308							
15	08/14/2017	3935	2017-08-14	912							
16	08/15/2017	4038	2017-08-15	732							
17	08/16/2017	4410	2017-08-16	972							
18	08/17/2017	4287	2017-08-17	840							
19	08/18/2017	4280	2017-08-18	1176							
20	08/19/2017	5811	2017-08-19	1752							
21	08/20/2017	5358	2017-08-20	1236							
22	08/21/2017	4023	2017-08-21	960							
23	08/22/2017	3791	2017-08-22	1008							
24	08/23/2017	4102	2017-08-23	888							
25	08/24/2017	3952	2017-08-24	996							
26	08/25/2017	4273	2017-08-25	1080							
27	08/26/2017	4796	2017-08-26	1188							
28	08/27/2017	4504	2017-08-27	1656							
29	08/28/2017	3584	2017-08-28	876							
30	08/29/2017	3565	2017-08-29	780							
31	08/30/2017	4307	2017-08-30	648							
32	08/31/2017	3704	2017-08-31	900							
33											
34											
35											
36											
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38											

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+	☰	Google Play - salesreport ▾	Import Data Sales Summary daily ▾	iTunes Pricing ▾	Items Sold ▾	Sales per Currency ▾	Items per Country ▾
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As the iTunes Summary Sales Report not just contains in-app purchases but also app download stats we had to split it by the product type identifier. As Google Spreadsheet function *SUMIFS* doesn't allow to look for more than one criteria in a single column we had to enter a clustered formula defining all product type identifiers that label in-app purchases:

```
=(SUMIFS('Import Data Sales Summary daily'!H:H,'Import Data Sales Summary daily'!J:J,A2,'Import Data Sales Summary daily'!G:G,"IA1"))+(SUMIFS('Import Data Sales Summary daily'!H:H,'Import Data Sales Summary daily'!J:J,A2,'Import Data Sales Summary daily'!G:G,"IA1-M"))+(SUMIFS('Import Data Sales Summary daily'!H:H,'Import Data Sales Summary daily'!J:J,A2,'Import Data Sales Summary daily'!G:G,"IA9"))+(SUMIFS('Import Data Sales Summary daily'!H:H,'Import Data Sales Summary daily'!J:J,A2,'Import Data Sales Summary daily'!G:G,"IA9-M"))+(SUMIFS('Import Data Sales Summary daily'!H:H,'Import Data Sales Summary daily'!J:J,A2,'Import Data Sales Summary daily'!G:G,"IAC"))+(SUMIFS('Import Data Sales Summary daily'!H:H,'Import Data Sales Summary daily'!J:J,A2,'Import Data Sales Summary daily'!G:G,"IAC-M"))+(SUMIFS('Import Data Sales Summary daily'!H:H,'Import Data Sales Summary daily'!J:J,A2,'Import Data Sales Summary daily'!G:G,"IAY"))+(SUMIFS('Import Data Sales Summary daily'!H:H,'Import Data Sales Summary daily'!J:J,A2,'Import Data Sales Summary daily'!G:G,"IAY-M"))+(SUMIFS('Import Data Sales Summary daily'!H:H,'Import Data Sales Summary daily'!J:J,A2,'Import Data Sales Summary daily'!G:G,"FI1"))
```

As Google Play Data is structured differently we can use an easier common function here:

```
=COUNTIF('Google Play - salesreport'!B:B,C2)
```

3.2 iTunes Pricing / Sales per Currency

Before comparing iTunes and Google sales amounts per currency we need to add the sheet iTunes Pricing. This is necessary as iTunes app reporting data doesn't contain the total sales amount per currency and it is not possible to combine *SUMIFS* functions with further calculations in data studio. Basically this sheet is directly connected to the

sheet *Import Data Sales Summary daily* calculating the total price (unit*customer price) and connects it to other data for further usage, e.g. units, currency, product type identifier and device type.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Units	Total Customer Price	Currency	Product Type Identifier	Device Type							
2	6	0	EUR		3 iPhone							
3	12	0	DKK		7 iPhone							
4	9	0	EUR		3 iPhone							
5	8	0	EUR		7 iPad							
6	9	0	EUR	7F	iPad							
7	11	0	EUR	7F	iPhone							
8	12	0	EUR		3 iPhone							
9	20	0	EUR	7F	Desktop							
10	2	0	EUR	3F	iPhone							
11	3	0	EUR	7F	iPhone							
12	9	0	EUR	3F	iPad							
13	14	0	CHF	3F	iPhone							
14	14	0	EUR	3F	iPad							
15	7	0	EUR		7 iPhone							
16	13	0	CHF		7 Desktop							
17	1	0	NOK		3 iPhone							
18	14	0	CZK	3F	iPhone							
19	17	0	EUR	7F	iPhone							
20	7	0	EUR	7F	iPad							
21	7	0	CHF	7F	iPhone							
22	7	0	SEK		3 iPhone							
23	8	0	EUR	7F	iPad							
24	10	0	EUR	3F	iPhone							
25	9	0	EUR	3F	iPad							
26	17	0	EUR	3F	iPad							
27	13	0	EUR		7 iPad							
28	17	0	EUR	7F	iPad							
29	20	0	EUR	7F	iPad							
30	13	0	EUR	3F	iPhone							
31	17	0	EUR	7F	iPhone							
32	13	0	SAR	7F	iPhone							
33	5	0	RON	7F	iPhone							
34	2	0	EUR	7F	Desktop							
35	20	0	EUR	7T	iPad							
36	8	0	CHF		7 iPhone							
37	8	0	EUR	7F	iPad							

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+ ≡ Google Play - salesreport Import Data Sales Summary daily iTunes Pricing Items Sold Sales per Currency Items per Country

To display the total sales amount in EUR (or another currency) for iTunes and Google Play data we created the sheet “Sales per Currency” that contains a list of all currencies, exchange rates, sales amount per currency and the sales amount in Euro. To automate the conversion from one currency to another we added the current exchange rate in column B by using the google finance function:

=Googlefinance("currency:AEDEUR")

!!! Please note that this modified function is currently not officially documented in the Google Spreadsheets function list. The first three letters describe the currency you wish to convert from. The last three letters describe the currency you wish to convert to. !!!

Column C and E are providing the total sales per currency for iTunes Connect and Google Play using the sumif function:

=Sumif('iTunes Pricing'!C:C,A2,'iTunes Pricing'!B:B)

=Sumif('Google Play - salesreport'!J:J,A2,'Google Play - salesreport'!M:M)

Column D and F provide the converted amount of each currency in EUR while column G shows the total sales for each currency.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Currency	Exchange Rate	iTunes Sales	iTunes Sales EUR	Google Play Sales	Google Play Sales EUR	Total Sales per Currency					
2	AED	0.23219	3482.27	808.5482713	0	0	3482.27					
3	AUD	0.64362	6097.79	3924.6596	0	0	6097.79					
4	CHF	0.858193881	152343.4	130740.1737	10547.64	9051.920107	162891.04					
5	COP	0.0002899078	248600	72.07107908	0	0	248600					
6	CZK	0.03902	385670	15048.8434	6477.24	252.7419048	392147.24					
7	DKK	0.13436	37867.48	5087.874613	2321.64	311.9355504	40189.12					
8	EUR		1125628.08	1125628.08	101778.72	101778.72	1227406.8					
9	HUF	0.00318	841425	2675.7315	0	0	841425					
10	MXN	0.04443	10411	462.56073	0	0	10411					
11	NOK	0.10176	72902	7418.50752	0	0	72902					
12	SEK	0.100754359	52709	5310.661509	0	0	52709					
13	TRY	0.22155	6937.3	1536.958815	0	0	6937.3					
14	USD	0.85267	46930.98	40016.63872	57.84	49.3184328	46988.82					
15												
16												
17												
18												
19												
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	+ ☰	Google Play - salesreport ▾	Import Data Sales Summary daily ▾	iTunes Pricing ▾	Items Sold ▾	Sales per Currency ▾	Items per Country ▾					

3.3 Items per Country

To compare the Sold Items per Country for Google Play and iTunes Connect we created the sheet “Items per Country”. Similar to the sheet “Sales per Currency” we first listed the country codes and then connected data by using the *SUMIFS* function for iTunes Connect and the *COUNTIF* function for Google Play data that have been already used in chapter 3.1.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Country	iTunes Items	Google Play Items									
2	AT	7508	648									
3	BE	187	36									
4	BG	0	204									
5	CH	12669	2064									
6	CZ	1052	132									
7	DE	60395	30180									
8	DK	254	48									
9	ES	1065	312									
10	FI	26	0									
11	FR	633	36									
12	GR	65	0									
13	GT	0	0									
14	HU	0	0									
15	LU	2115	12									
16	MX	0	0									
17	NL	428	96									
18	NO	520	0									
19	SE	282	0									
20	SK	41	144									
21	TR	53	0									
22	US	62	24									
23												
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+ ☰ Google Play - salesreport Import Data Sales Summary daily iTunes Pricing Items Sold Sales per Currency Items per Country

!!! Once in a while Apple is updating the product type identifiers. If you are looking for a complete list of all product type identifiers please follow the link below. Stated with December 2017 all current available identifiers have been considered in the formulas above. <http://help.apple.com/itc/appssalesandtrends/?lang=en#/itc2c006e6ff> !!!

4 How To Create A Dashboard With Google Data Studio

Before you can start creating your personal app reporting dashboard with iTunes Connect and Google Play Store data you have to setup the connection to the data source first.

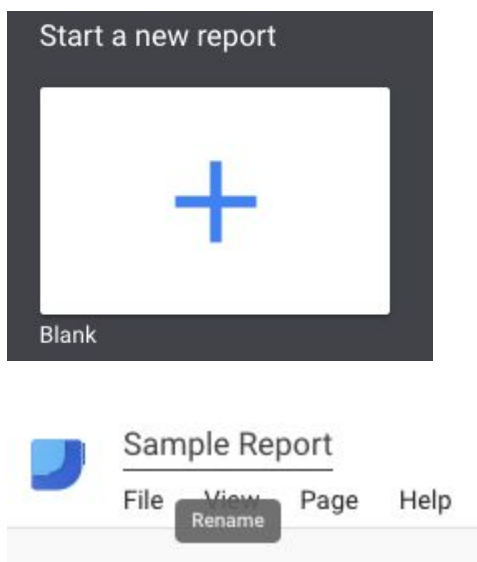
4.1 Connect Google Spreadsheets With Data Studio

To connect Google Spreadsheets with data studio just follow the three steps below and start creating your own dashboard:

1. Navigate to Google Data Studio and login with your Google credentials:

<https://datastudio.google.com/navigation/reporting>

2. Create a new Dashboard and name it:



3. Connect the data sources:



!!! Please note that each sheet of the document should be connected as a separate data source. !!!

5 THE RESULT: Google Data Studio Dashboard with App Reporting Data of iTunes Connect & Google Play



AppStoreMetric

iTunes and Google Play In App Sales Dashboard

Sales Data Overview - Total Items Sold | Sales Data

Total In-App Purchases
171,664

Total Sales
€1,446,265.67

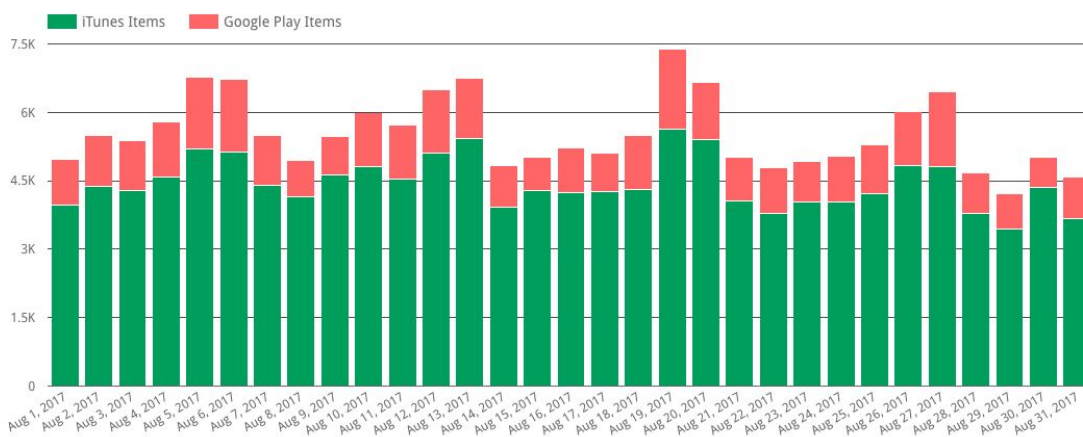
Total Items Sold iTunes
137,692

iTunes Sales EUR
€1,334,843.13

Total Items Sold Google Play
33,972

Google Play Sales EUR
€111,422.54

Total Items Sold per Day



!!! View the complete dashboard online:

https://datastudio.google.com/open/0B_6GYdjP7H8aLW1jWUIHbmJUS2M !!!

If you have any questions regarding the dashboard setup with AppStoreMetric please [contact us](#).



AppStoreMetric