Report on Android Device Customization
US Consumer Study of 3000 Android Users
November 2016

Android users are able to choose from over 2.2 million apps in the Google Play store.[1] There are countless ways that consumers can customize their devices and use the apps they want. Mobile apps are created by developers to serve the needs of consumers; like any other product, they identify a problem and come up with a solution, then compete with other solutions on the market. Given the breadth of options and opportunities for consumers to download apps for and customize their Android devices, how are these consumers engaging with and organizing their apps?

In order to more closely investigate this question, the Application Developers Alliance surveyed 3,000 U.S. Android users. Respondents were asked which apps they use to meet certain needs, how they organize their apps on their device, and their thoughts on apps that come pre-loaded on the device.

We found that apps, even category leaders, tend not to be exclusively used; that almost all Android users customize their device and their home screen, often in significant ways; and that most Android users prefer their device come "ready-to-go" with some apps preloaded but still do download many new apps on their devices. As a result, there is a significant amount of competition in the mobile app industry: for downloads, for users, and for placement on their home screen, regardless of the presence of pre-loaded apps.

Android Users Download a Lot of Apps

Android users can vary significantly, making customization important. Based on our data, it is clear that Android users are taking full advantage of their ability to quickly download new software for their devices. Around 40% have downloaded more than 25 additional apps on their device; another 7% have downloaded more than 60 apps.

The homescreen on an Android device is where users prefer to store their most frequently used apps. We asked respondents to tell us the content of their homescreen. Of the actual listings of apps that we received, we found enormous variety: around 2,000 unique apps were reported in total.

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[1] https://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/

Most Android Consumers Do Not Exclusively Use Any One App

We looked specifically at 14 categories/functions: SMS texting, non-SMS messaging, video/voice calls, social media, shopping, hotels, flights, dining, email, productivity, notes, cloud storage, music, streaming video, and e-Reading. For each category, respondents were able to choose which apps they use to complete those functions, or write in one. The detailed results in each category are in the Appendix.

Most apps, including category leaders, aren't used exclusively. A majority of users of almost every top app also use another competing app in the same category. For example, 75% of consumers use the Amazon app for shopping; however, 88% of those Amazon app users also use at least one other app for shopping. Similarly, 47% of Android consumers use Google Drive to store files, but 70% of those consumers also use another app like DropBox or OneDrive. This non-exclusivity is the norm, as the table below indicates.

| App Category	Average # of Apps Used	% of Users with 1 App	% of Users with 2+ Apps	% of Users with 3+ Apps	% of Apps with +15% Share	% of top app's users that also use other app(s)
SMS Texting	1.8	44%	45%	17%	3	74%
Messaging (non-SMS)	2.3	38%	43%	25%	4	57%
Social Media	3.0	34%	63%	46%	7	72%
Video/ Voice Calls	2.3	27%	28%	14%	2	55%
Shopping	3.4	16%	74%	55%	6	88%
Hotels	2.9	24%	48%	33%	5	74%
Flights	2.8	23%	44%	29%	6	73%
Restaurants	2.3	26%	39%	22%	3	68%
Email	1.9	42%	54%	18%	3	65%
Productivity	3.0	21%	55%	38%	6	66%
Notes	1.6	42%	24%	10%	2	43%
Cloud	2.2	32%	43%	22%	3	70%
Music	2.7	27%	56%	35%	6	78%
Video	2.9	26%	58%	39%	4	72%
E-Reading	1.9	34%	26%	11%	2	47%

In no category do a majority of consumers use only one app. The average number of apps used per category is 2.5, and ranges from 1.6 (for notetaking apps) to 3.4 for shopping apps. Each of the 14 categories have at least 10% of users who are using 3 or more apps in that category. In six of the 14, over 30% of users use 3 or more apps in that category.

This level of non-exclusivity among apps in the same category demonstrates the competitiveness of the app industry. Even when there is a clear category leader, like Amazon among shopping apps, competing apps can and do get noticed, downloaded, and used. Indeed, app developers use a variety of ways to engage their users and get their apps in the hands of new users. Almost 40% of consumers have downloaded an app from an advertisement. When apps send notifications to their users, 46% of users "almost always" or "frequently" open that app; only 6% say they "never" do.
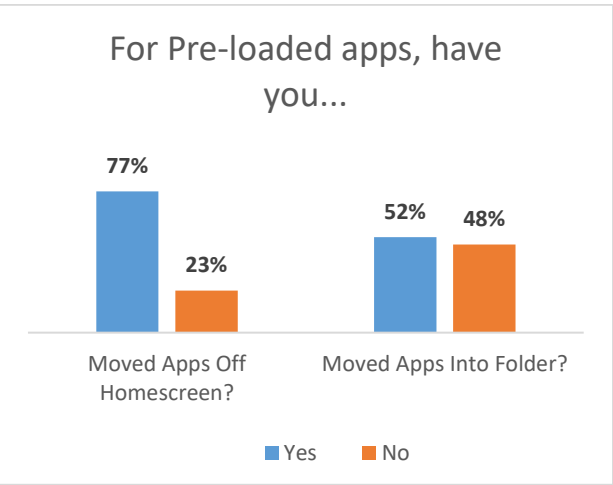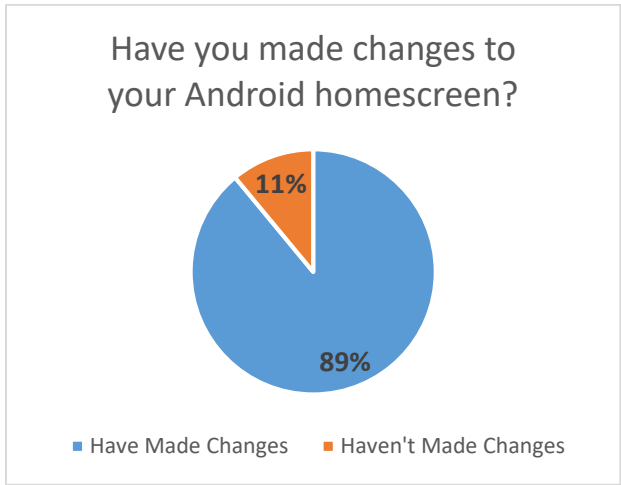
This data shows a low bar for competition. Competing apps don't have to replace Amazon; they only have to create a shopping experience that provides a reason for users to use it in conjunction with Amazon (and other competing apps). These developers have various tools for finding and keeping users.

Consumers like Pre-Loaded Apps, But Also Customize Their Devices

Over three-quarters (76%) of Android users prefer to buy an Android device with basic apps already loaded. The reasons for this are simple: 39% like the ease and convenience of having apps pre-loaded, while 36% like having a device that's ready for use as soon as they get it. Of the 24% that don't like pre-loaded apps, the biggest reason (46%) is because they prefer to customize and choose apps themselves. Apps can be pre-loaded by the device manufacturer, the mobile service provider, or any developer that negotiates a deal with the provider.

Prefer Pre-Loaded Apps?

24%

76%

■ Prefer pre-loaded apps

■ Don't prefer pre-loaded apps
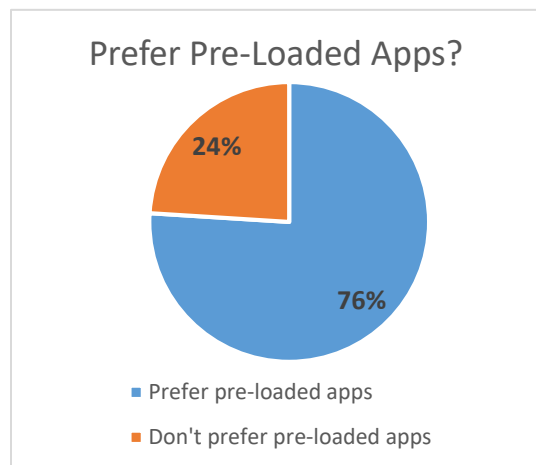
Customization is very important – the feeling that the device you own and use every day is truly "yours", set up just the way you like for ease of use and familiarity. In addition to ease of finding and downloading new apps, key to this customization is the ability to make changes on the device including which and where apps are displayed. Android users take full advantage of this: 89% make at least some adjustment to their homescreen, with only 11% leaving the suite of apps that comes with the device untouched. For 77% of Android users, this means moving a pre-loaded app off the home screen. In addition, for 66% of Android users, half or more of their homescreen apps are those they downloaded, with 35% saying their homescreen is "mostly" or "all" downloaded apps. Over half (52%) of users say they move pre-loaded apps they don't use into a folder.

Have you made changes to your Android homescreen?

- Have Made Changes
- Haven't Made Changes

For Pre-loaded apps, have you...

Moved Apps Off Homescreen?	Moved Apps Into Folder?
77% / 23%	52% / 48%

- Yes
- No

Conclusions

Android consumers benefit from the high amount of competition in the mobile app space – in every category there are numerous apps to choose from for whatever need they have (and if a need is unmet, that's an opportunity for an app developer to fill it). Consumers take full advantage of this competition by customizing their devices, with both pre-loaded and downloaded apps, and typically downloading and using competing apps alongside each other.

Pre-loading apps makes things easier for consumers to get started, but it does not pose a barrier to competition given consumers can, and do, customize their devices and will download and use additional competing apps of their choice. In the end, consumers have a device that is unique to them, serving their needs and offering new opportunities every day.

{ Application Developers Alliance }

APPENDIX: QUESTIONS & RESULTS
n=3,000 of US-based Android users
August 2016

1.   What is your age?

18 - 24	14%
25 - 34	21%
35 - 49	30%
50 - 64	27%
Over 65	9%

2.   Do you regularly use an Android phone or tablet?

Android phone	72%
Android tablet	6%
Both	22%

[IF Q2=1]
3.   What brand and model phone do you use?

Samsung	55%
LG	16%
Motorola	7%
HTC	4%
Alcatel	2%
ZTE	2%
Google	1%
Blu	1%
Kyocera	1%
Huawei	1%
Sony	1%
Other	4%

4.   Do you use this device primarily for business or personal use?

Personal	66%
Work	1%
Both	33%

5. Which app(s) do you use for SMS texting? Please choose all that apply.

App Name	% using	% other
Facebook Messenger	55%	74%
Messenger (Android)	48%	64%
Whatsapp	22%	90%
Go SMS Pro	9%	
Textra SMS	6%	
Chomp SMS	6%	
Handcent Next SMS	3%	
EvolveSMS	2%	
Other	8%	
None	11%	

CATEGORY USE

3+ Apps	17%	
2 Apps	28%	
1 App	44%	
Average # of Apps	1.8	

6. Which app(s) do you use to message people (not texting)? Please choose all that apply.

App Name	% using	% other
Facebook Messenger	60%	57%
Snapchat	25%	92%
WhatsApp	20%	90%
Google Hangouts	18%	86%
Kik	11%	
Yahoo Messenger	11%	
LINE	8%	
BBM	7%	
Viber	6%	
Hangouts Dialer	4%	
WeChat	4%	
Tango	4%	
KakaoTalk	3%	
Whisper	2%	
Slack	2%	
Link	2%	
Other	2%	
None	19%	

CATEGORY USE

3+ Apps	25%
2 Apps	18%
1 App	38%
Average # of Apps	2.3

7.   Which app(s) do you use to make video and voice calls? Please choose all that apply.

App Name	% using	% other
Skype	43%	55%
Whatsapp	17%	82%
Google Hangouts	14%	
LINE	7%	
Tango	5%	
ooVoo	5%	
Viber	5%	
Free video calls and chat (Mail.Ru Group)	4%	
Hangouts Dialer	4%	
BBM	4%	
WeChat	3%	
Imo free video calls	3%	
JustTalk	2%	
KakaoTalk	1%	
Icq video calls & chat	1%	
Other	4%	
None	38%	

CATEGORY USE

3+ Apps	14%
2 Apps	14%
1 App	34%
Average # of Apps	2.3

8. Which social media app(s) do you use to stay in touch with people? Please choose all that apply.

App Name	% using	% other
Facebook	82%	72%
Instagram	38%	98%
Twitter	35%	98%
Snapchat	27%	99%
Pinterest	23%	97%
Google Plus	19%	96%
LinkedIn	16%	96%
Tumblr	10%	
Vine	6%	
Moments (By Facebook)	5%	
Periscope	3%	
Flickr	3%	
Music.ly	2%	
Path	1%	
Whisper	1%	
Other	1%	
None	10%	

CATEGORY USE

3+ Apps	46%
2 Apps	17%
1 App	27%
Average # of Apps	3.0

9. Which app(s) do you use to find, review, and purchase products when shopping? Please choose all that apply.

App Name	% using	% other
Amazon	75%	88%
Google search	54%	92%
eBay	42%	99%
Walmart	41%	98%
Retailer-specific app (e.g., Target, Macy's, etc.)	19%	99%
Groupon	17%	99%
Yahoo search	13%	
Etsy	12%	
Wish	11%	
Bing search	9%	
OfferUp	6%	
Jet	4%	
Mercardi	2%	
5miles	2%	
Other	1%	
None	10%	

CATEGORY USE

3+ Apps	55%
2 Apps	19%
1 App	16%
Average # of Apps	3.4

10.   Which app(s) do you use to find, review, and book hotels? Please choose all that apply.

App Name	% using	% other
Google search	40%	74%
Trip Advisor	26%	89%
Trivago	24%	88%
Hotels.com	20%	91%
Expedia Hotels	20%	93%
KAYAK	13%	
Priceline	13%	
Hotwire	11%	
Bookings.com	10%	
Yahoo search	10%	
Hotel-specific app (e.g., Hilton, Holiday Inn, etc.)	8%	
Bing search	7%	
Choice Hotels	6%	
Other	1%	
None	28%	

CATEGORY USE

3+ Apps	33%
2 Apps	15%
1 App	24%
Average # of Apps	2.9

11.   Which app(s) do you use to find, review, and book flights? Please choose all that apply.

App Name	% using	% other
Google search	34%	73%
Expedia	25%	88%
Travelocity	18%	93%
Airline-specific app (e.g., JetBlue, Delta, etc.)	16%	84%
Priceline	15%	95%
Southwest Airlines	15%	85%
KAYAK	14%	
Orbitz	12%	
CheapFlights	10%	
Yahoo search	10%	
CheapOAir	6%	
Bing search	6%	
SkyScanner	5%	
Other	1%	
None	33%	

CATEGORY USE

3+ Apps	29%
2 Apps	15%
1 App	23%
Average # of Apps	2.8

12. Which app(s) do you use to find, review, and make reservations at places to eat? Please choose all that apply.

App Name	% using	% other
Google search	41%	68%
Yelp	22%	82%
TripAdvisor	16%	89%
Yahoo search	11%	
Restaurant Finder	9%	
Open Table	9%	
Restaurant.com	9%	
AroundMe	9%	
Bing search	8%	
UrbanSpoon	8%	
Near Me Restaurants	6%	
Zomato	3%	
Other	1%	
None	35%	

CATEGORY USE

3+ Apps	22%	
2 Apps	17%	
1 App	26%	
Average # of Apps	2.3	

13.   Which app(s) do you use for email? Please choose all that apply.

App Name	% using	% other
Gmail	79%	65%
Yahoo Mail	38%	82%
Microsoft Outlook	27%	90%
AOL Mail	9%	
Inbox by Gmail	8%	
Email mail box fast mail	6%	
All Email Providers	5%	
MyMail	2%	
Mail.RU	1%	
ASUS Email providers	1%	
Other	3%	
None	4%	

CATEGORY USE

3+ Apps	18%	
2 Apps	36%	
1 App	42%	
Average # of Apps	1.9	

14.   Which productivity app(s) do you use? Please choose all that apply.

App Name	% using	% other
Google Drive (Docs, Sheets, Slides)	44%	66%
Adobe Acrobat Reader	42%	67%
Microsoft Office (Word, Excel, PowerPoint)	28%	72%
DropBox	27%	72%
Google PDF Viewer	25%	71%
Microsoft Office Mobile	15%	77%
OneNote	13%	
OfficeSuite + PDF Editor	8%	
Polaris Office + PDF	7%	
WPS Office + PDF	6%	
Docs To Go	6%	
Box	4%	
Quick Edit	2%	
Other	1%	
None	24%	

CATEGORY USE

3+ Apps	38%
2 Apps	17%
1 App	21%
Average # of Apps	3.0

15.   Which app(s) do you use to take notes? Please choose all that apply.

App Name	% using	% other
NotePad	38%	43%
OneNote	18%	72%
ColorNote	13%	
Evernote	11%	
Google Keep	9%	
Keep my notes	6%	
Note Everything	3%	
Wanderlist	2%	
Any Do	2%	
Todoist	2%	
Remember The Milk	2%	
Other	3%	
None	34%	

CATEGORY USE

3+ Apps	10%	
2 Apps	14%	
1 App	42%	
Average # of Apps	1.6	

16. Which app(s) do you use to store files on the cloud? Please choose all that apply.

App Name	% using	% other
Google Drive	47%	70%
Dropbox	31%	82%
Microsoft OneDrive	17%	87%
My Cloud	12%	
Adobe Acrobat	11%	
Verizon Cloud	10%	
Amazon Drive	10%	
Amazon Photos	7%	
G Cloud Backup	3%	
CM Backup	3%	
Box	3%	
Cloud Console	2%	
pCloud	2%	
Cloud VPN	1%	
Other	1%	
None	26%	

CATEGORY USE

3+ Apps	22%
2 Apps	21%
1 App	32%
Average # of Apps	2.2

17.   Which app(s) do you use to listen to music? Please choose all that apply.

App Name	% using	% other
Pandora	44%	78%
YouTube Music	28%	89%
Google Play Music	27%	88%
Spotify	25%	88%
iHeartRadio	20%	88%
Amazon music	17%	91%
Soundcloud	14%	
Samsung Music	12%	
Shazam	11%	
Apple Music	10%	
VeVo	6%	
Free Music for Soundcloud	6%	
Rhapsody	4%	
Tidal	1%	
Other	3%	
None	17%	

CATEGORY USE

3+ Apps	35%
2 Apps	21%
1 App	27%
Average # of Apps	2.7

18. Which app(s) do you use to watch streaming videos? Please choose all that apply.

App Name	% using	% other
YouTube	70%	72%
Netflix	41%	92%
Hulu	23%	97%
Amazon Prime	15%	96%
HBO GO	12%	
Crackle	11%	
HBO NOW	10%	
NBC	8%	
Vine	8%	
History TV	8%	
Watch ESPN	8%	
CBS	7%	
NFL Mobile	6%	
The CW Network	6%	
VeVo	6%	
Vimeo	5%	
Other	2%	
None	16%	

CATEGORY USE

3+ Apps	39%
2 Apps	19%
1 App	26%
Average # of Apps	2.9

19. Which app(s) do you use for e-Reading (Books or magazines)?

App Name	% using	% other
Amazon Kindle	41%	47%
Play Books	15%	76%
Flipboard	10%	
Nook	9%	
Play News Stand	6%	
eBook Reader & Free ePub Books	5%	
EBook Reader & PDF Reader	5%	
EBook Reader	5%	
Kobo	3%	
Aldiko Book Reader	3%	
FBReader (Favorite Book Reader)	3%	
eReader Prestigio: Book Reader	2%	
Cool Reader	2%	
Moon+Reader	2%	
Universal Book Reader	2%	
Other	1%	
None	10%	

CATEGORY USE

3+ Apps	11%
2 Apps	15%
1 App	34%
Average # of Apps	1.9

20. How many apps in total do you have downloaded on your Android device?

Fewer than 10	17%
10 - 25	42%
26 - 40	24%
41 - 60	10%
More than 60	7%

21. What types/categories of apps do you typically download? Please choose all that apply.

Games	64%
Social, networking, and dating	55%
Shopping	52%
Email	49%
Messaging and SMS texting	40%
News and media	33%
Video	31%
App stores	29%
Web browsers	28%
Work, productivity, and time management	26%
Find/review hotels and flights	16%
Find/review restaurants	16%
Music	10%
Other	4%

22. Have you ever downloaded an app to your Android device from an advertisement?

Yes	39%
No	47%
Not sure	14%

23. Generally speaking, how often do you open an app when you receive a notification from that app?

Almost always	18%
Frequently	28%
Sometimes	34%
Rarely	14%
Never	6%

24. If you were to buy or receive a new Android device, would you prefer it to come with basic apps so it works out of the box (like an iPhone)?

Yes	76%
No	24%

[IF Q24=1]
25.   Why would you prefer your new device to come with basic apps already installed?

        Easy/Convenient   39%

Easy/Convenient	39%
Phone is ready to use	36%
Like/Use apps that come pre-loaded	14%
Able to customize device	4%
Other	7%

[IF Q24=2]
26.   Why would you not prefer your new device to come with basic apps already installed?

Prefer to customize device	46%
Don't use pre-loaded apps	15%
Takes up space/memory	13%
Difficult to get rid of/uninstall	6%
Don't like it (general)	5%
Other	7%

27.   What apps do you have on your Android device's home screen?

[OPEN-ENDED – ALMOST 2,000 UNIQUE APPS PROVIDED]

28.   Does your homescreen have mostly apps that came pre-loaded when you first got the device or mostly apps that you downloaded and moved to the homescreen?

All apps that came with the device (no changes made)	11%
Mostly apps that came with the device	24%
About half apps that came with the device, half new apps you downloaded	31%
Mostly new apps that you downloaded and moved to the homescreen	25%
All apps that you downloaded and moved to the homescreen	10%

Have you ever done any of the following to pre-loaded apps that came on your Android device:

29.   Moved the app to another screen?

Yes	**77%**
No	**23%**

30.   Moved the app into a folder?

Yes	**52%**
No	**48%**