2022 US K12 EdTech Product Safety Benchmark

Last Update: July 12, 2023

INTERNET SAFETY LABS

Scope

- This is a living presentation and will be updated with every published Findings Report from the 2022 Benchmark data.
- At the time of this publishing, the presentation covers Findings Reports 1 and 2.

Methodology

Data Collection – By the Numbers

- 663 schools
  - 50 states + DC
  - Covering 455,882 students
  - 29,000+ data points
- 1722 apps found
  - 88,000+ data points
- 1357 apps scored
  - Plus network traffic collection

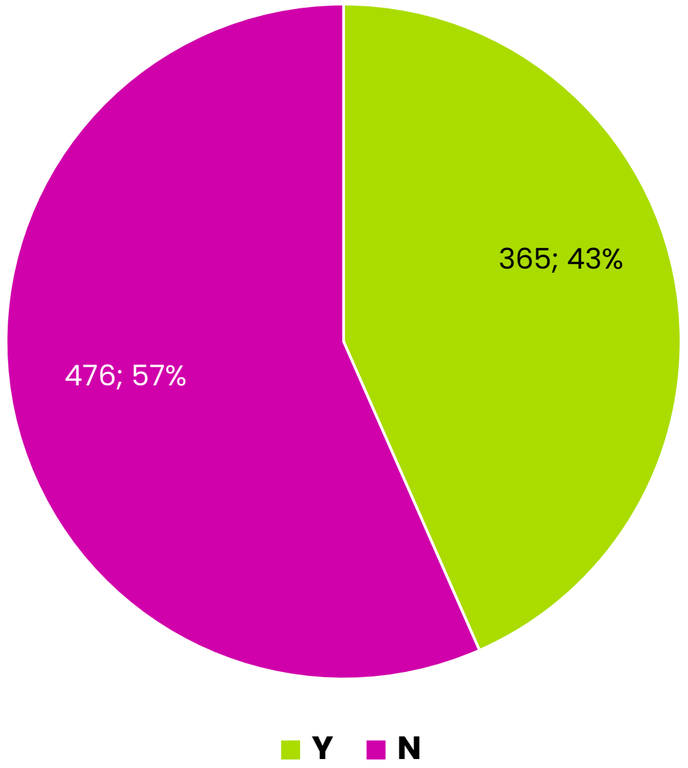
Caveats

- Identified technologies from school and district websites
- Tested *apps* not websites/webservices
- Tested free versions of apps
  - Did not have school-provided credentials

ISL App Safety Score Rubric

SOME RISK	HIGH RISK	DO NOT USE	UNABLE TO TEST
	Presence of at least one (1) SDK that is High Risk or Very High Risk	Presence of advertising (any)	Login required; core functionality that we were not able to access as a result
	WebView Use	Presence of one (1) or more registered Data Broker SDKs	Paid app
	Presence of up to two (2) of the following data aggregator platforms (SDKs or NW traffic): Apple, Google	Presence of one (1) or more of the following data aggregator platforms (SDKs or NW traffic): FB, Amazon, Twitter, Adobe	Broken App
	Presence of a dangling domain	Presence of MaxPreps	
		Questionable permission behavior.	

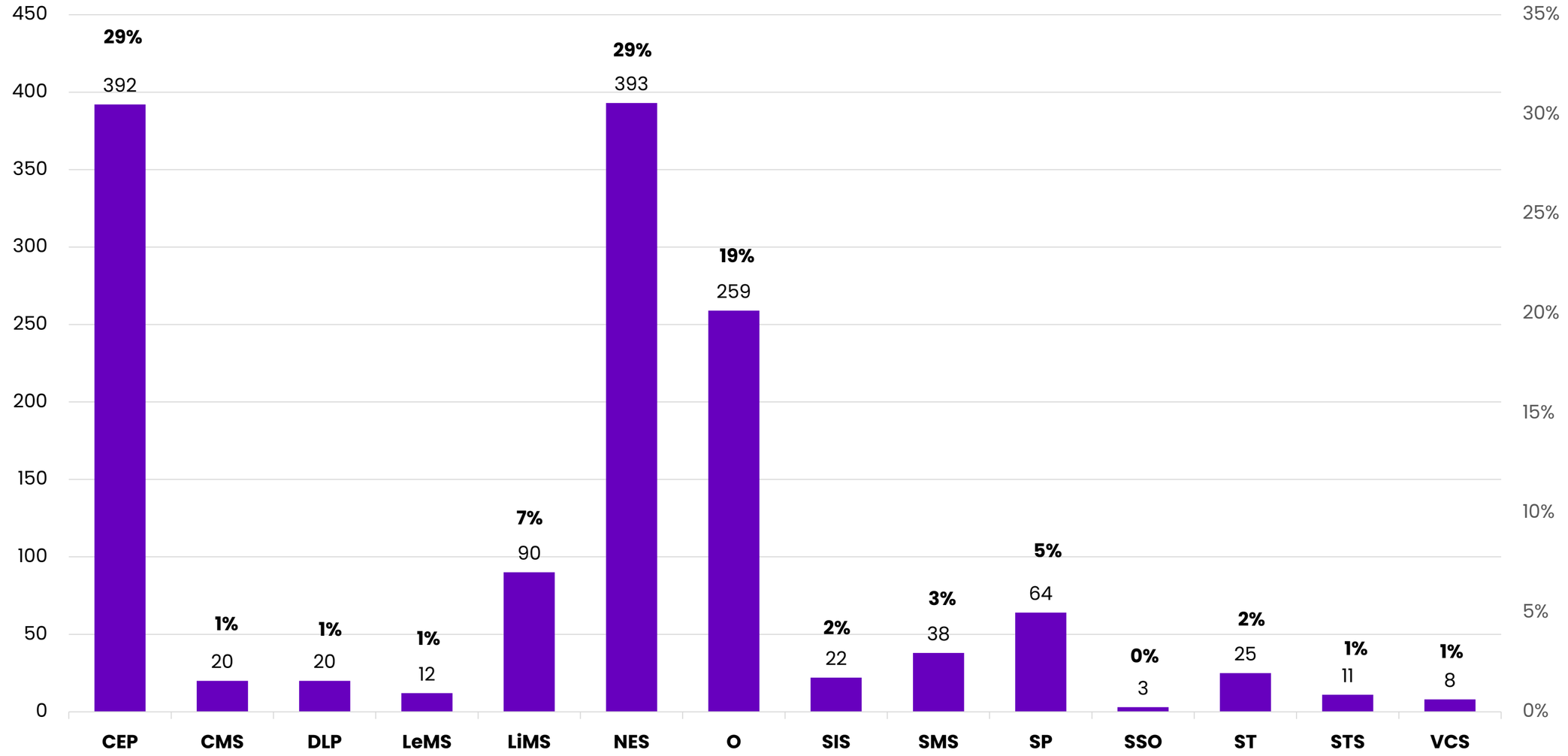
476 (28%) of All Apps Were NOT for Children



Edtech Categories

- Classroom Messaging Software (**CMS**)
- Community Engagement Platform (**CEP**)
- Digital Learning Platform (**DLP**)
- Learning Management System (**LeMS**)
- Library Management Software (**LiMS**)
- Non-Education Specific (**NES**)
- [Educational] Other(**O**)
- School Transportation Software (**STS**)
- Safety Platform (**SP**)
- Single Sign On (**SSO**)
- School Management Software (**SMS**)
- Student Information System (**SIS**)
- Study Tools (**ST**)
- Virtual Classroom Software (**VCS**)

Apps Tested by Edtech Category

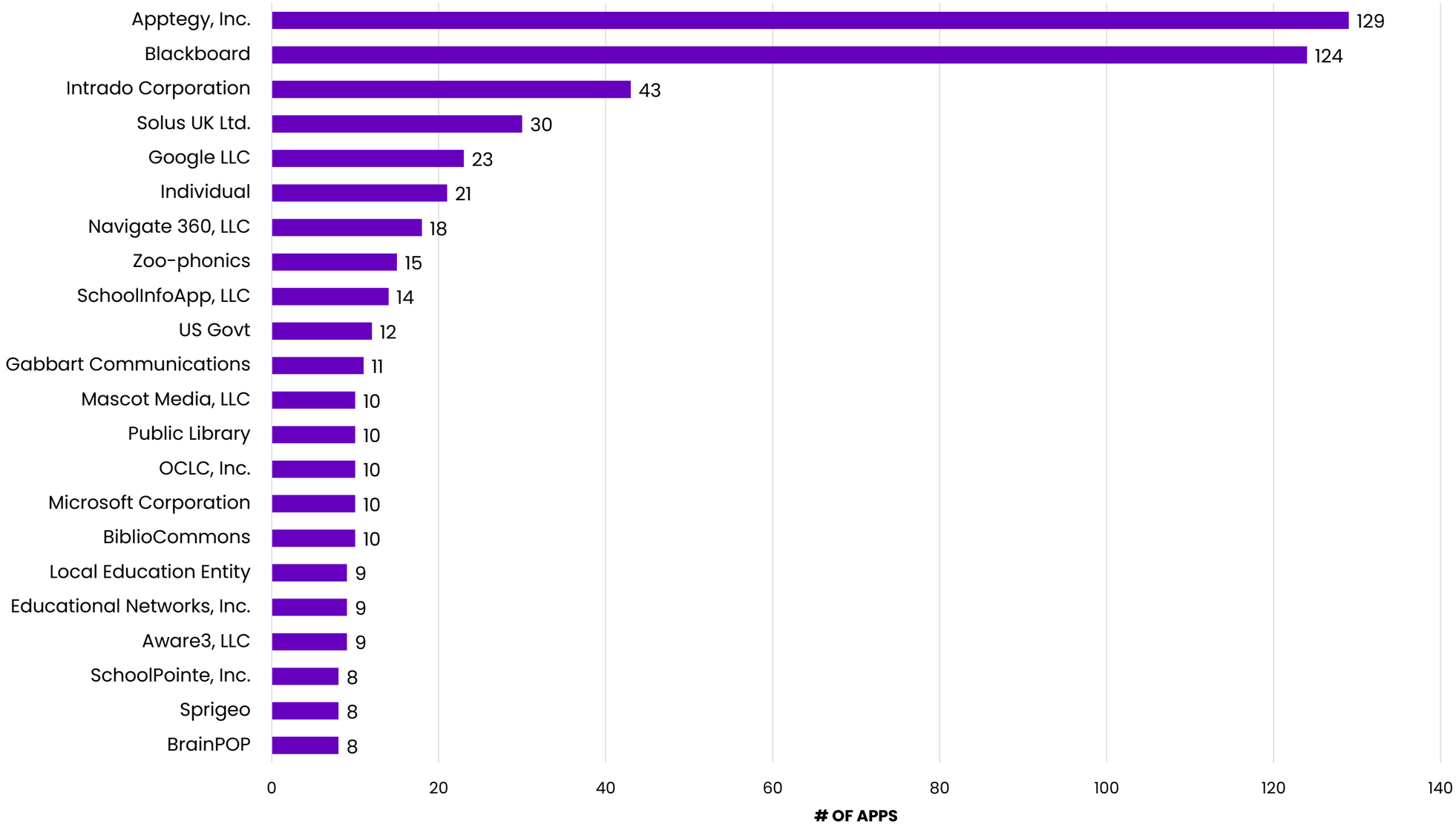


CEP
Community Engagement Platform

NES
Non-Education Specific

O
Educational, Other

Most Common Developers



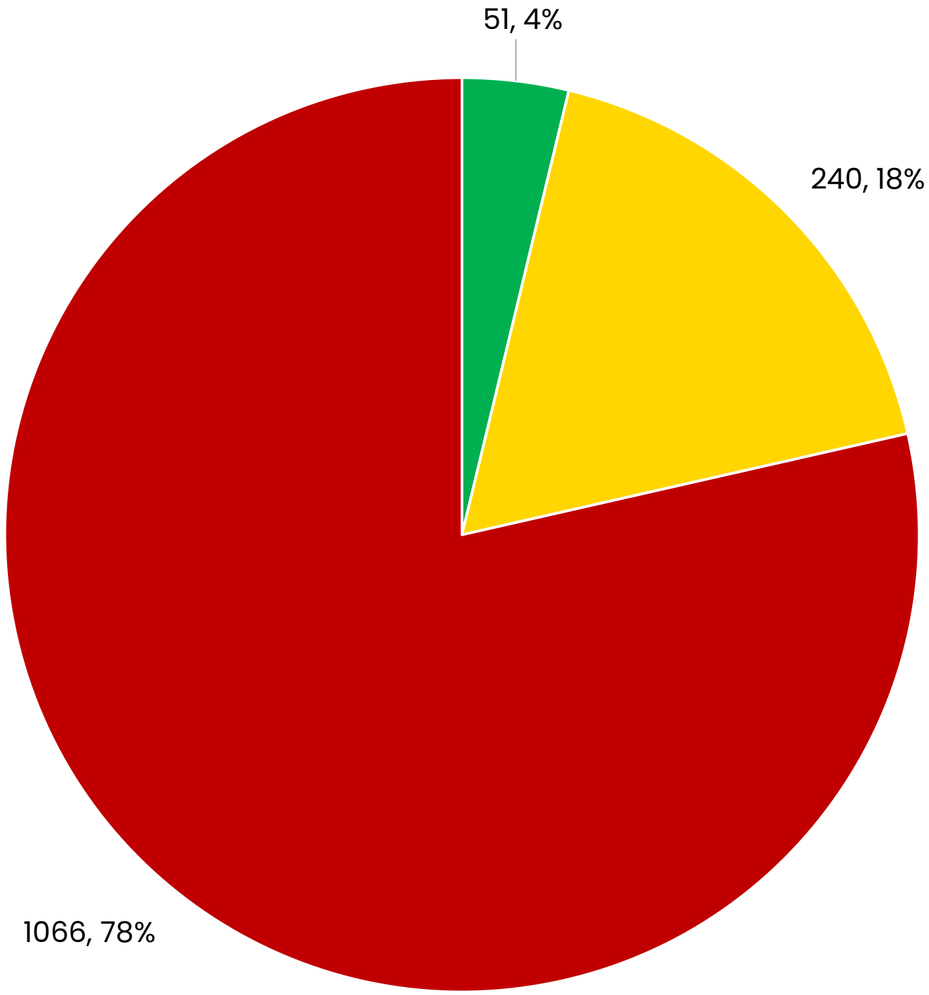
US K12 EdTech Benchmark Findings Report 1: Key Findings

Pub: December 2022

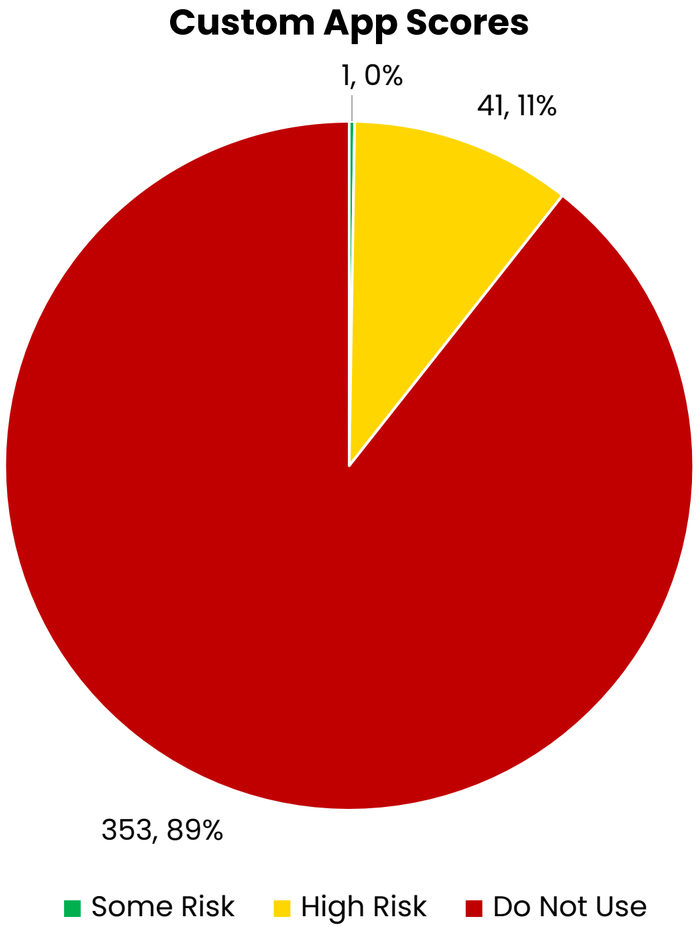
Key Findings

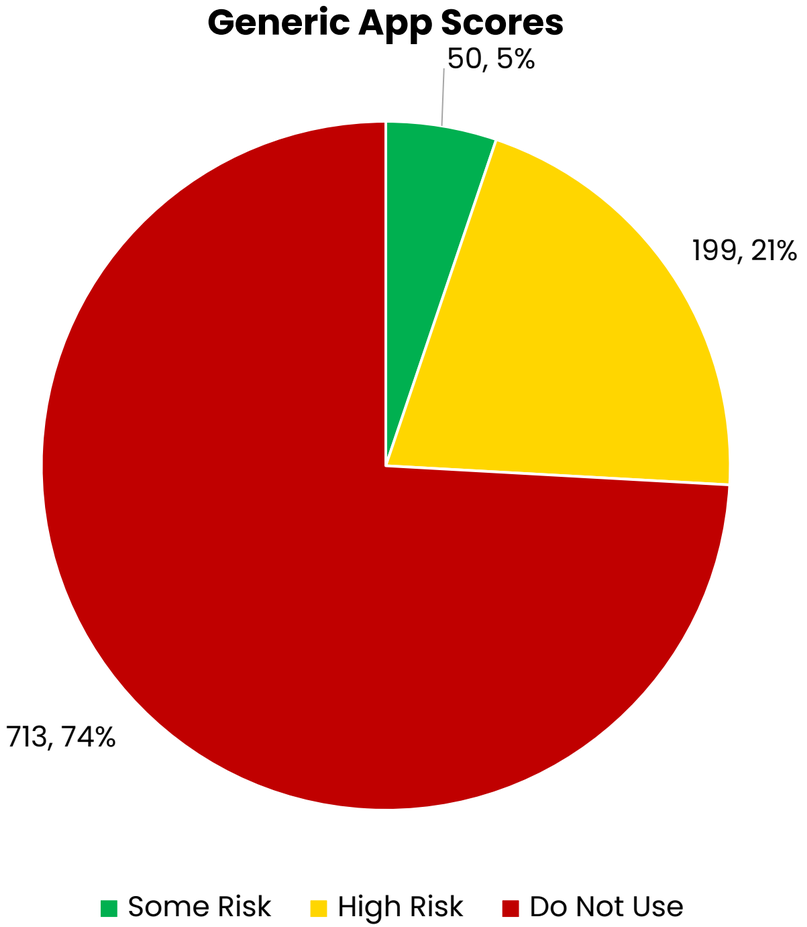
- Most apps used by K12 students are unsafe for children.
  - **Custom CEP apps (aka “School Utility Apps”) for school districts are less safe than NES and O apps.**
  - **From a safety perspective, iOS has slight advantage over Android.**

App Scores (1357 apps)

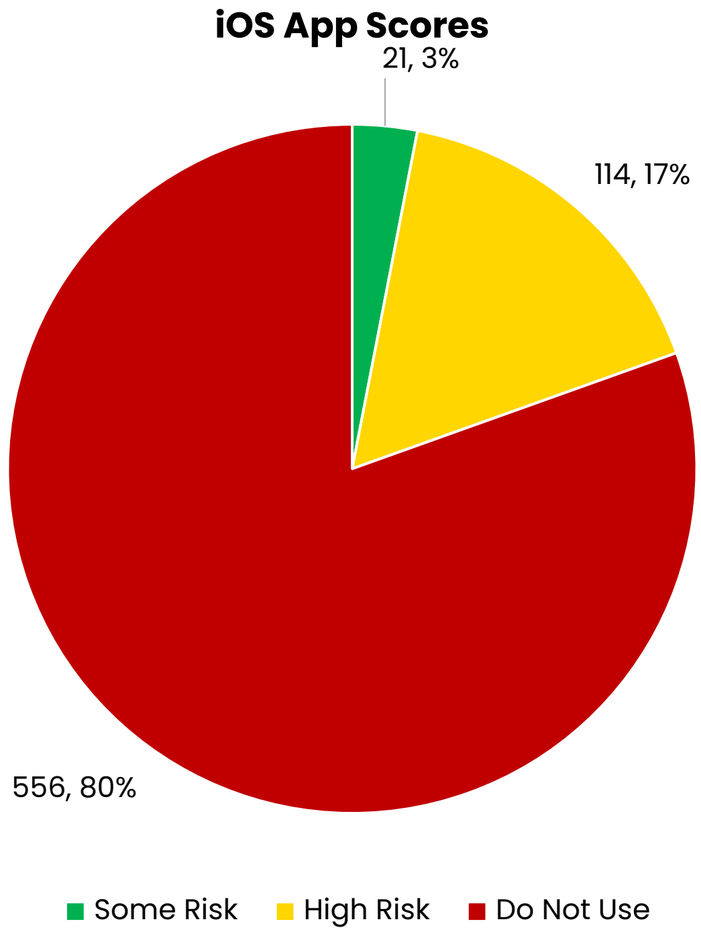


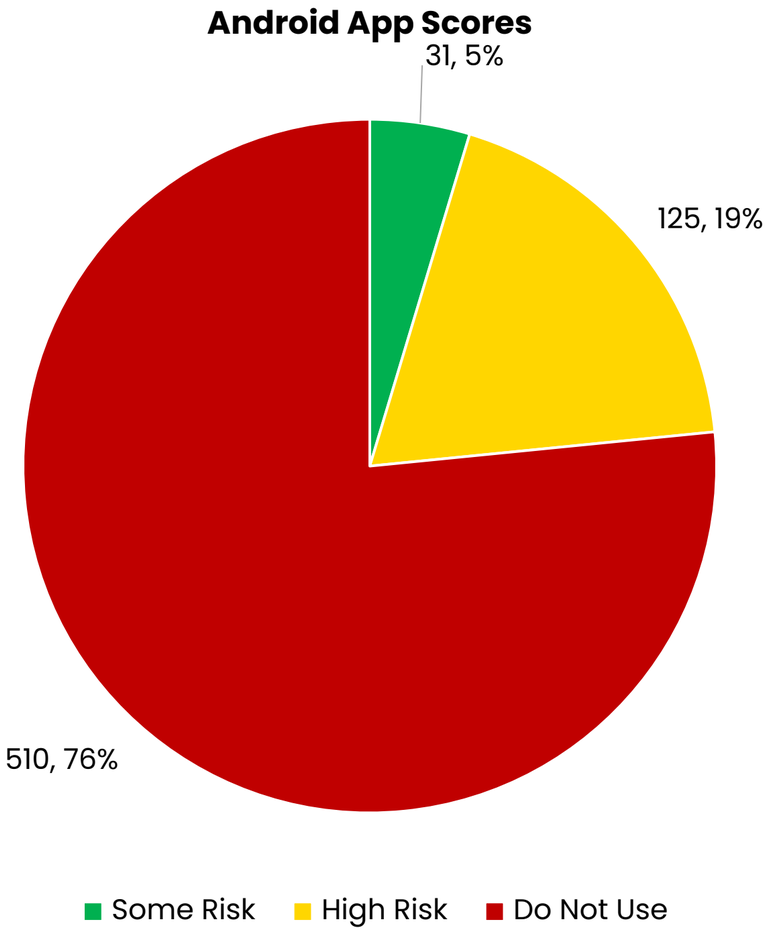
Comparing Custom and Generic App Scores



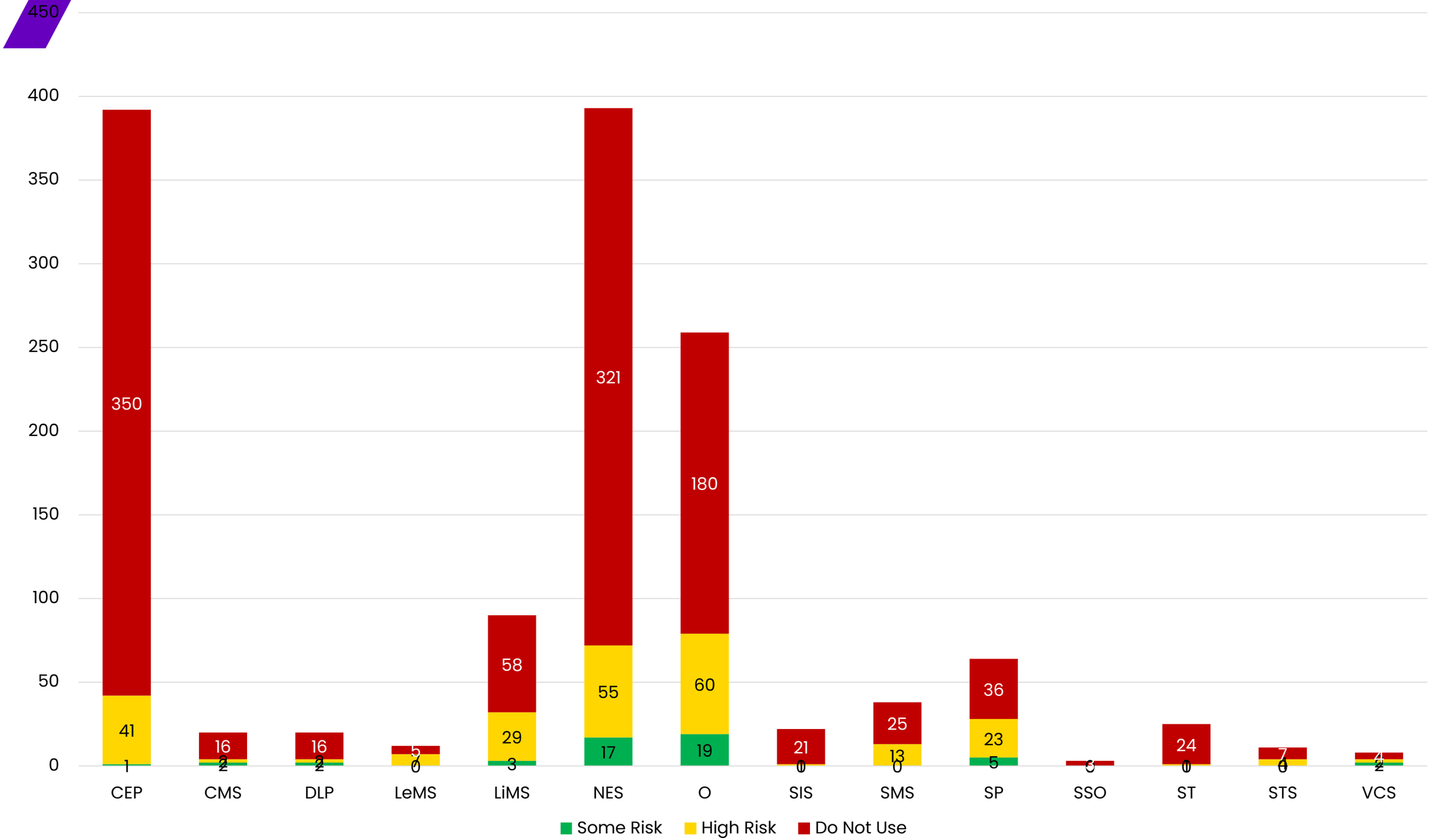


Comparing iOS and Android Scores



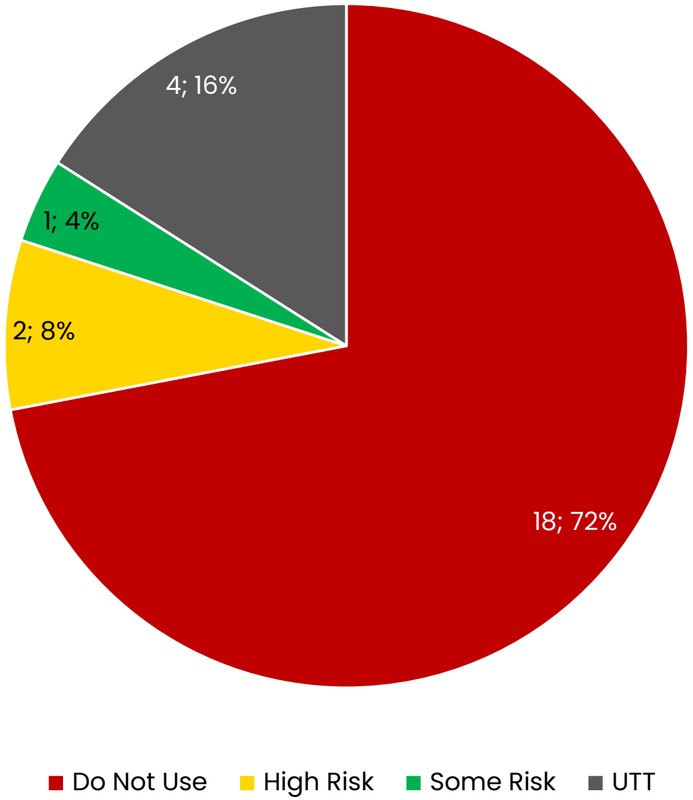


App Scores by Category

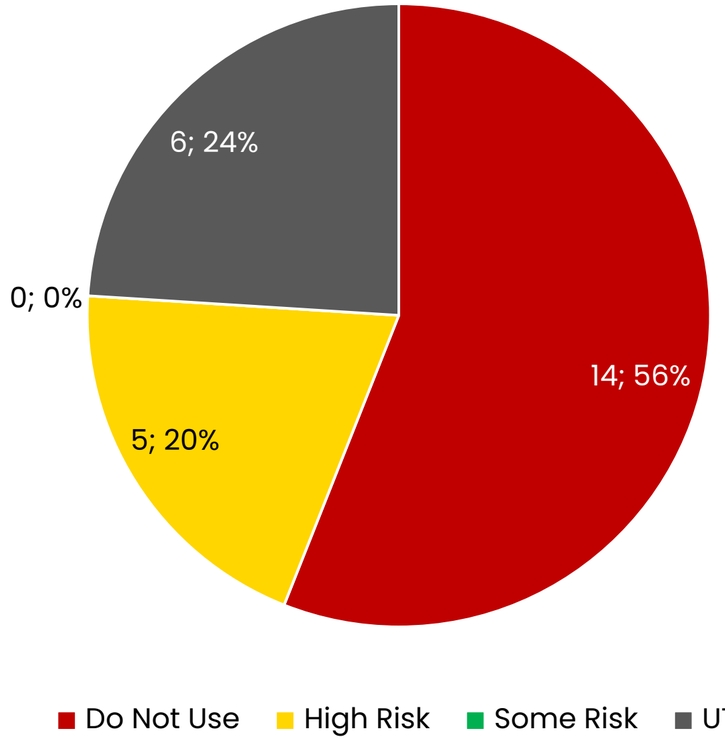


Most Recommended vs. Most Required

25 Most Recommended App Scores



Top 25 Mandatory/Key Apps by App Score



Key Findings

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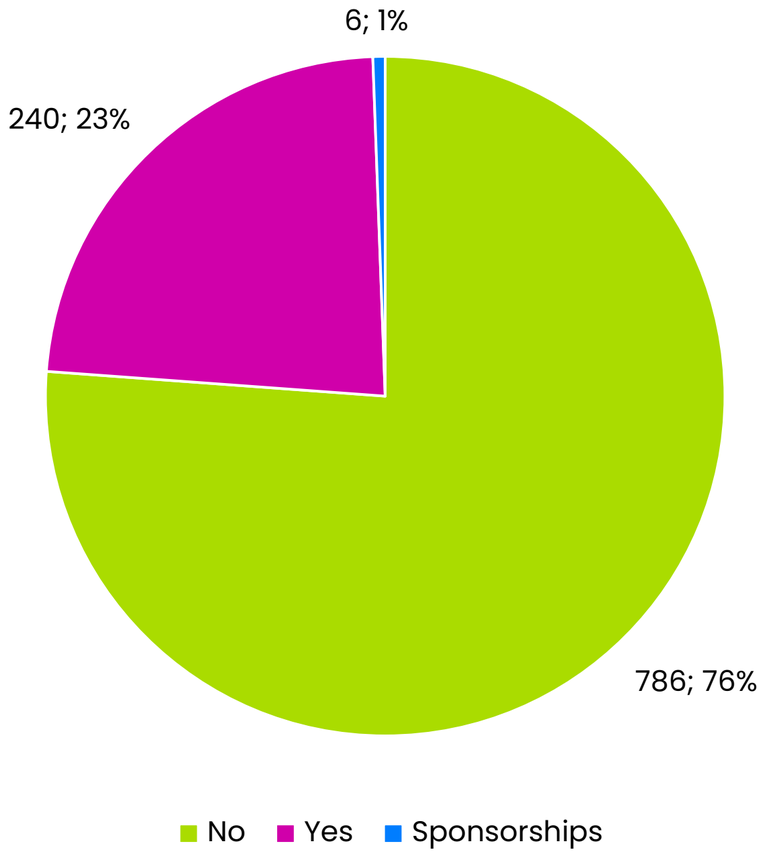
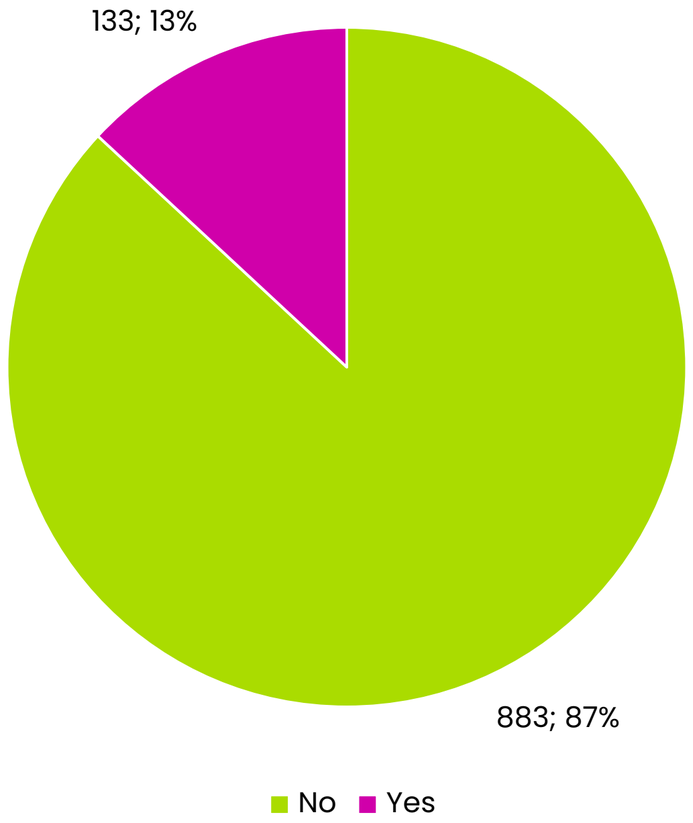
  - **Custom CEP apps for school districts are less safe than NES and O apps.**
  - **From a safety perspective, iOS has slight advantage over Android.**
- 23% of apps used by K12 students include ads.
  - **13% include retargeting ads.**

Advertising in K12 Edtech

Ad Presence - All Apps



Retargeting Ad Presence - All Apps



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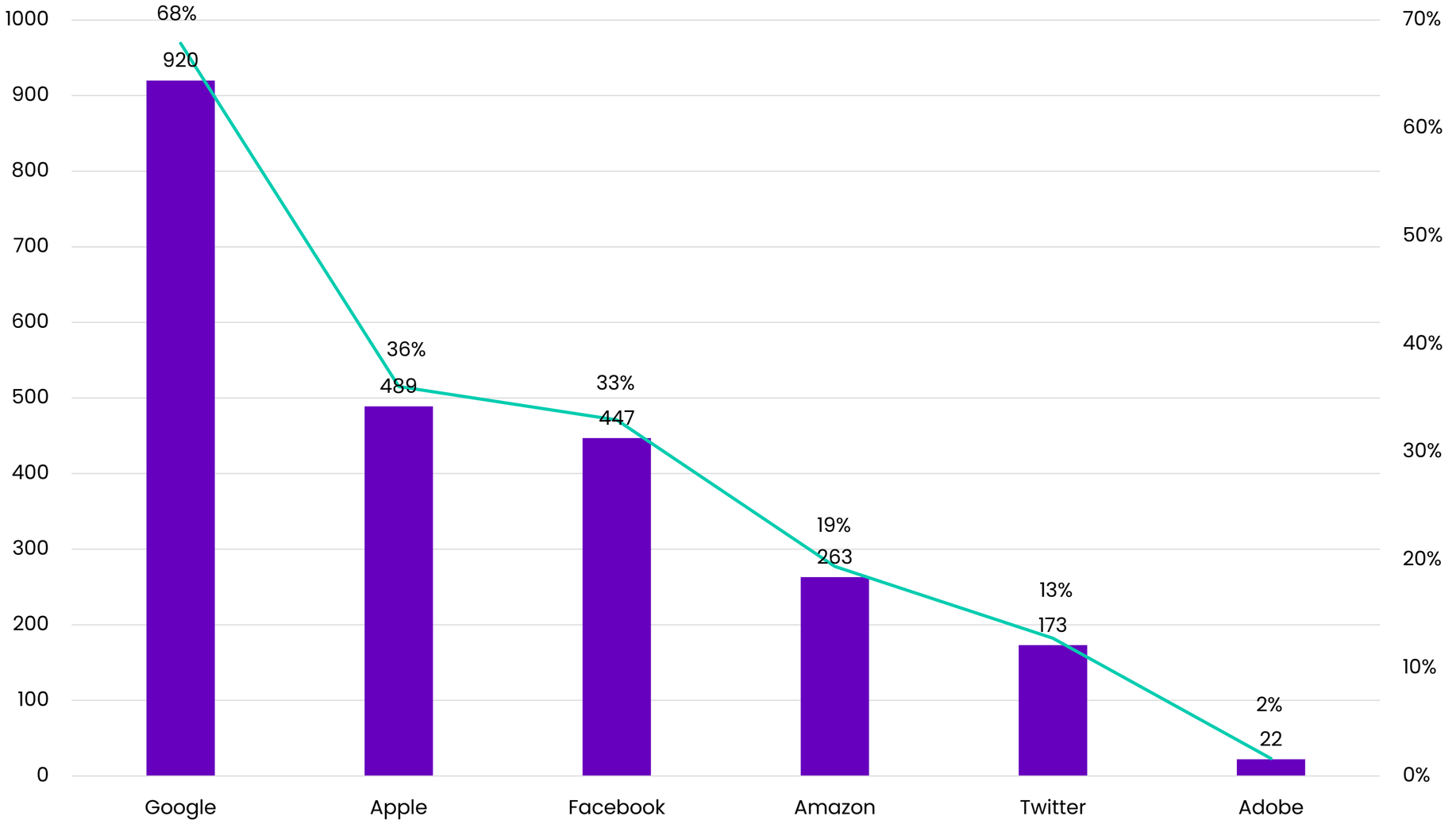
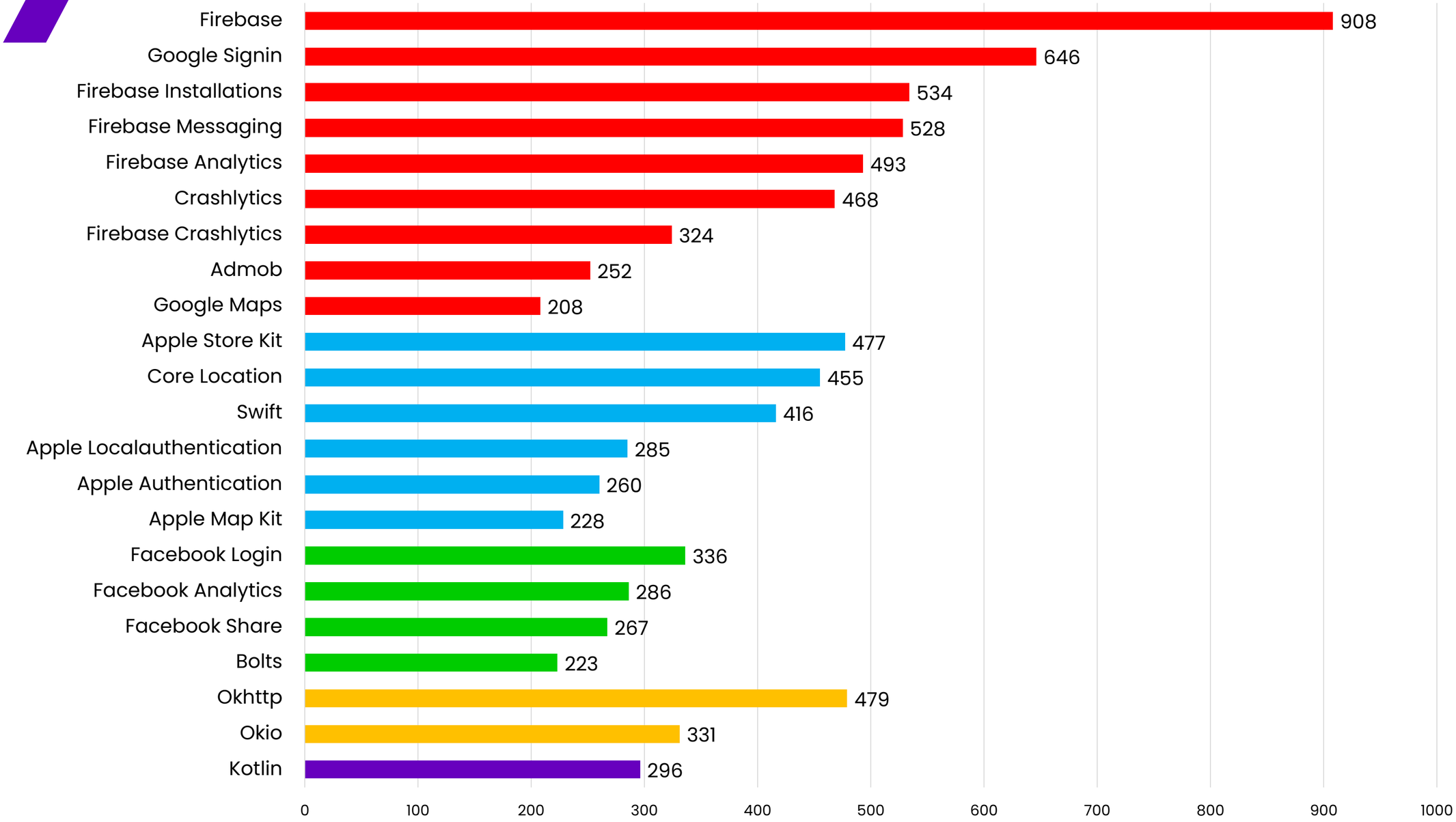
- Google dominates K12 edtech in the US.

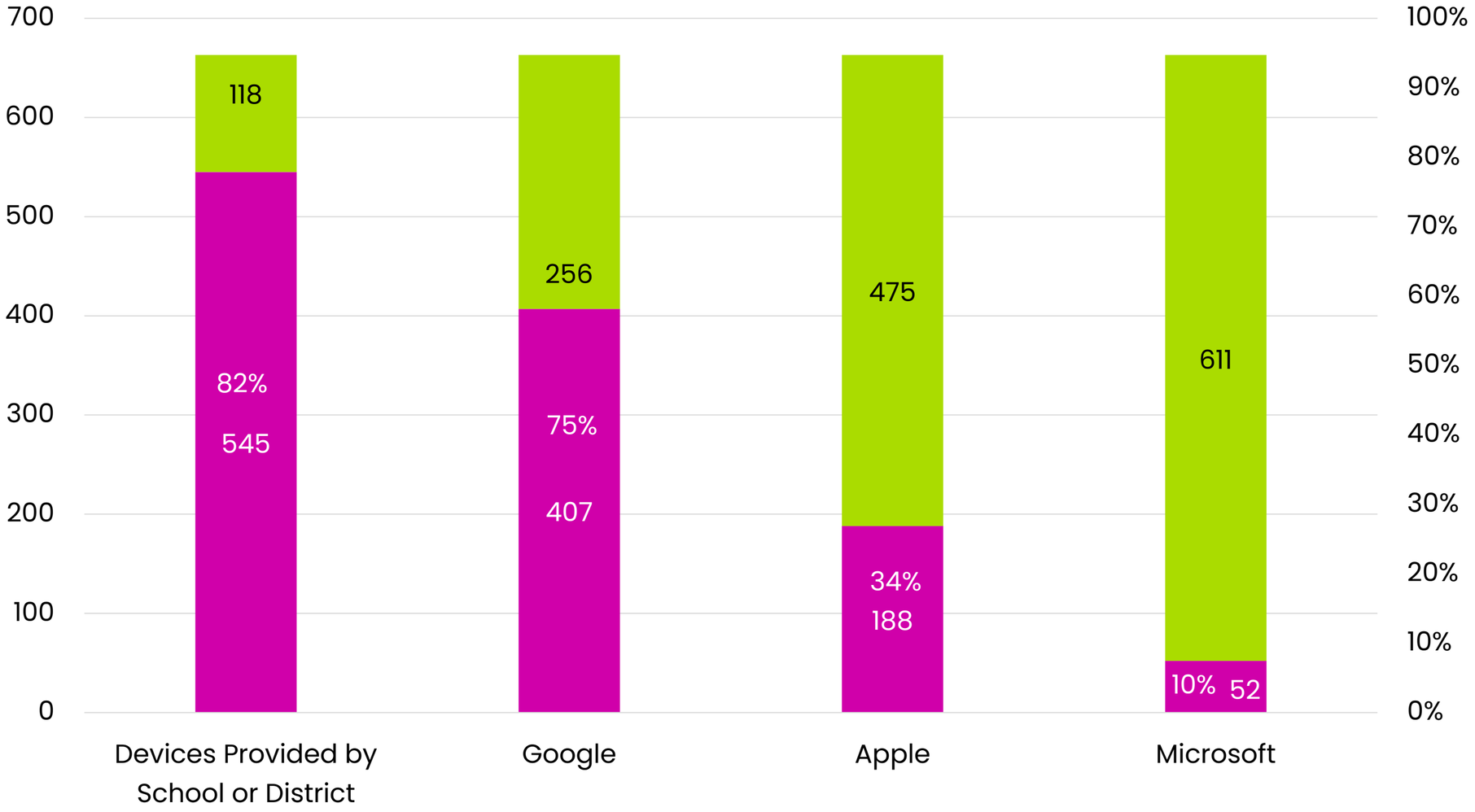
Observed Network Traffic to Big 6 Platforms - All Apps



Most Used SDKs (Clustered by Developer)



School/District Provided Computing Devices by OS Vendor



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- 82% of schools provide personal computing devices to students.

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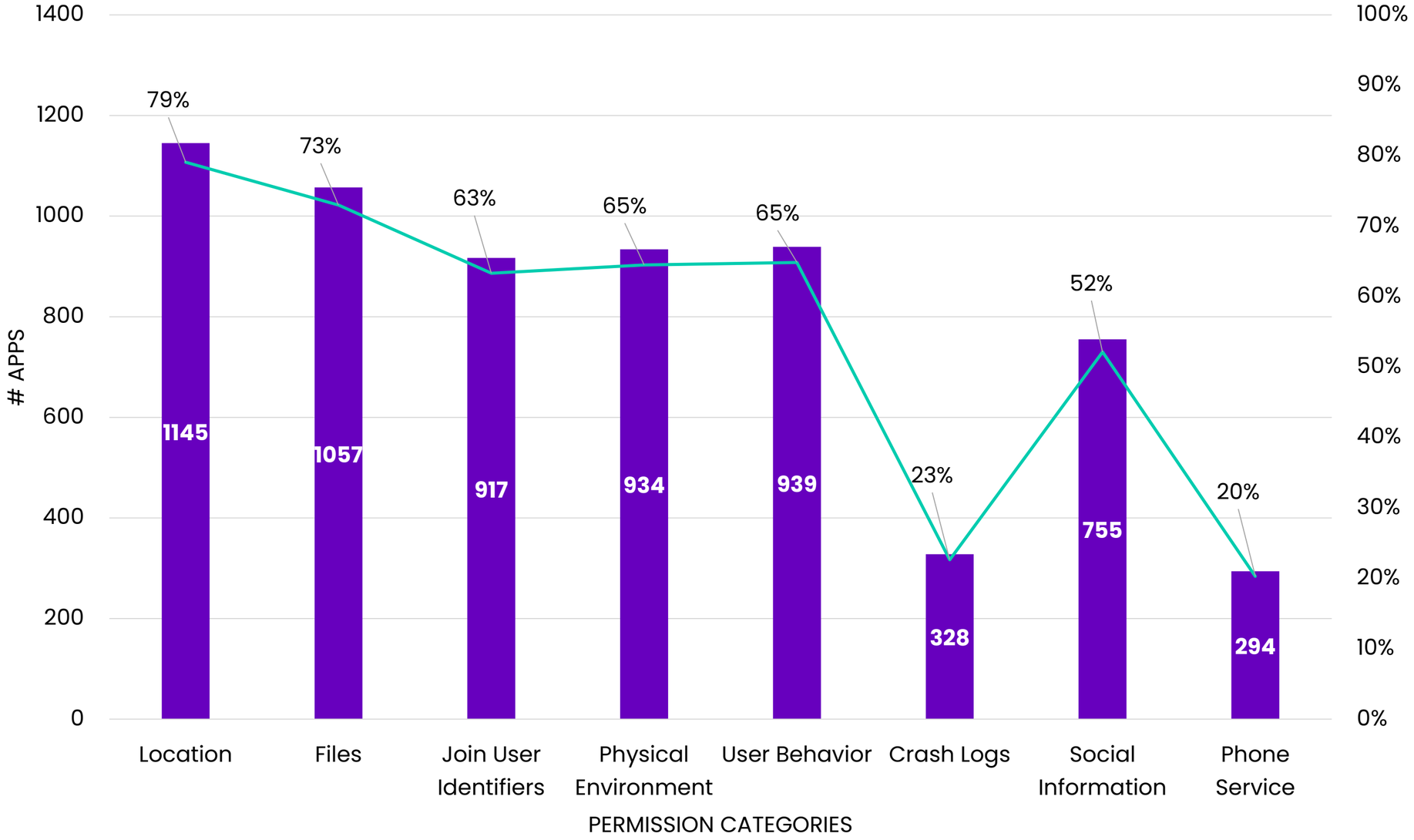
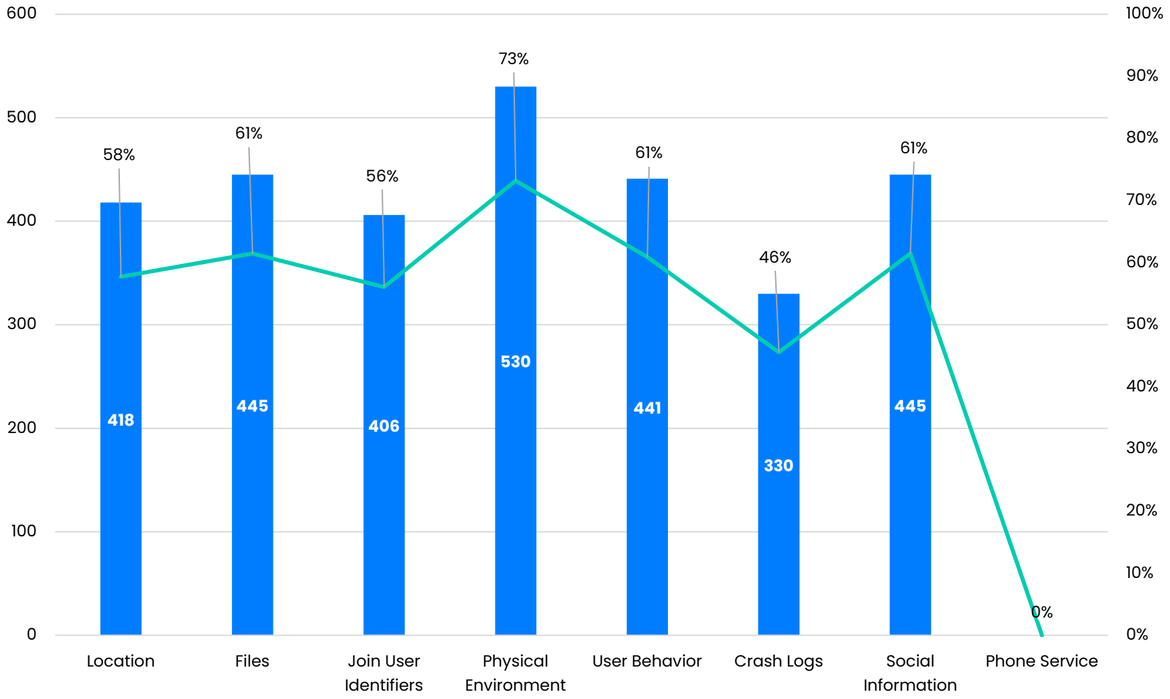
- 82% of schools provide personal computing devices to students.
- 79% of apps access location

Permissions - All Apps

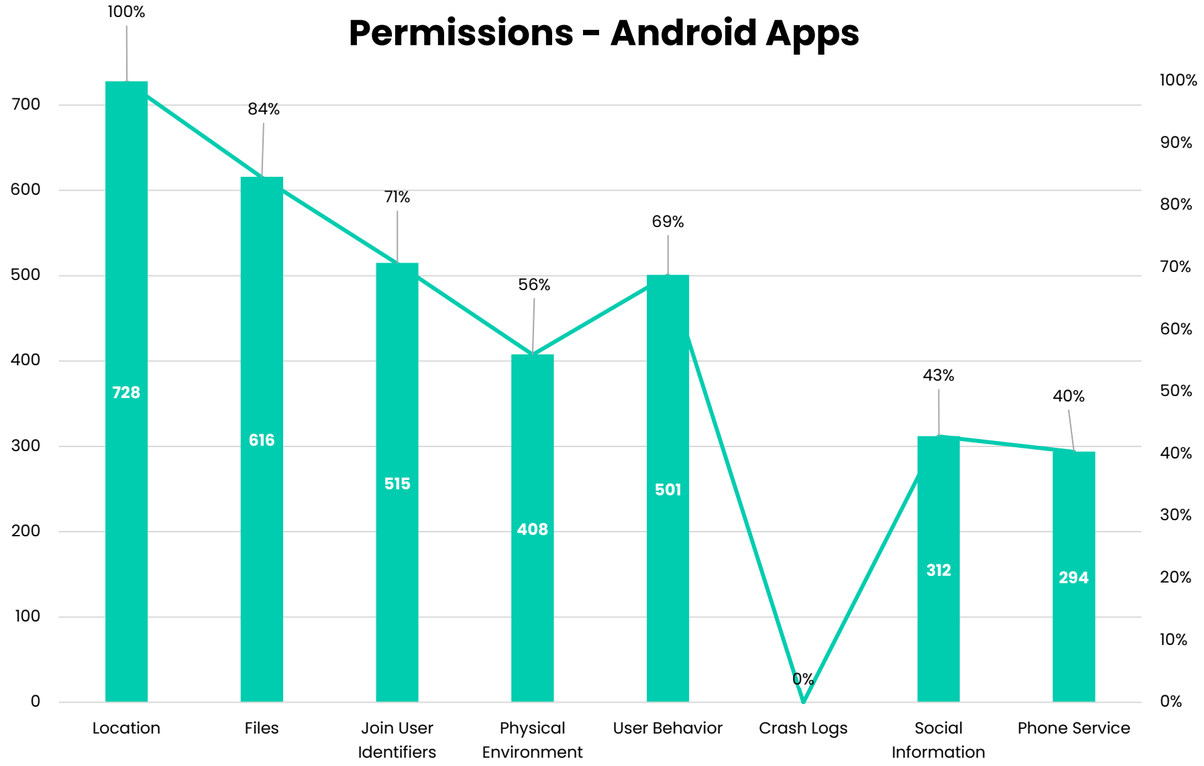


Permissions by OS

Permissions - iOS Apps



Permissions - Android Apps



US K12 EdTech Benchmark Findings Report 2: Key Findings

Pub: June 2023

Findings Report 2

- School Technology Behaviors
- Analysis of apps with 3rd party certifications and “promises”

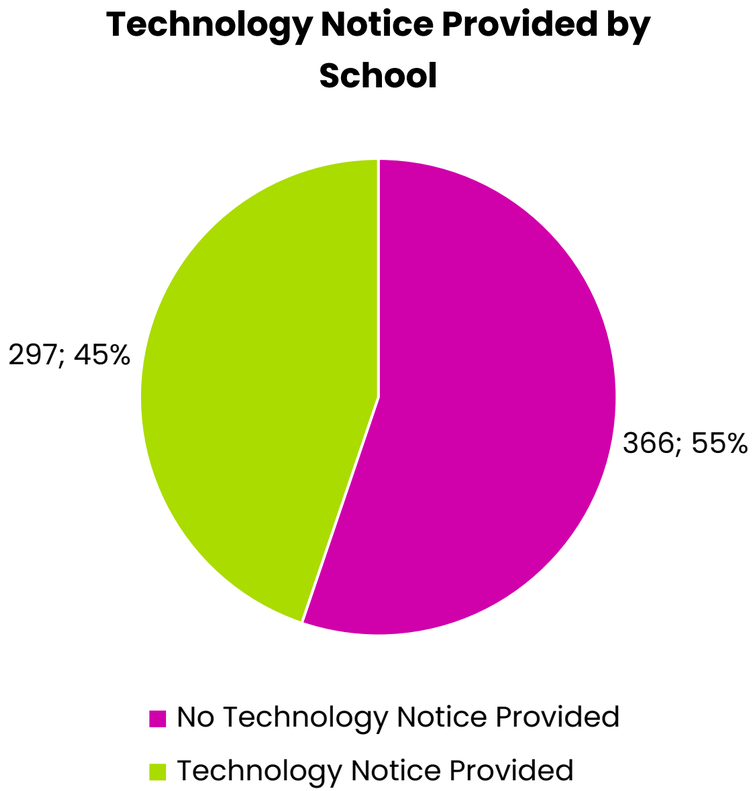
School Technology Behaviors

- Notice
- Consent
- Vetting

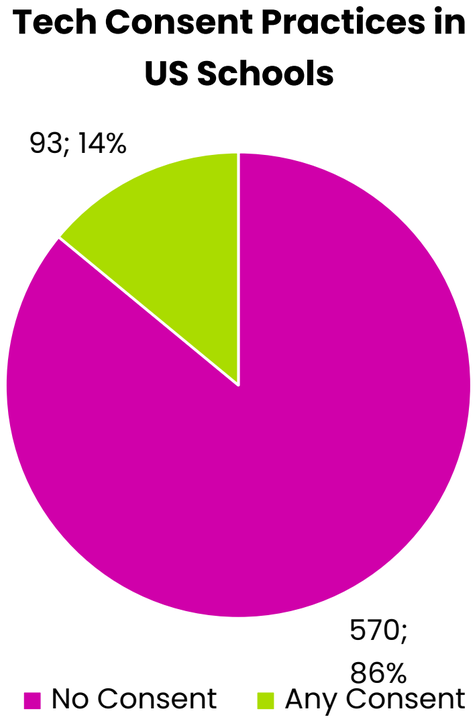
School Technology Behaviors

- Most schools NOT providing:
  - **Notice,**
  - **Consent, or**
  - **Vetting**

Notice



Consent



- Some schools overuse COPPA ability to consent on behalf of students:
  - ISL occasionally found school-consented-to technology lists containing in at least one case **hundreds** of websites/apps.
  - The lists included “off the shelf” technologies that students provision and use independently of the school (or don’t require a login at all).
  - ISL estimates that of all the technologies required or recommended by schools, **only 19.3% of them are licensed by the school/LEA**, and 80.7% are off the shelf technologies.

Children's Online Privacy Protection Act (COPPA)

Dear Parents/Guardians,

If you have a school-aged child(ren) 13 years old or younger, [redacted] Public Schools would like to share some important information, especially as we reopen schools using a virtual learning format for the 2020-2021 school year.

[redacted] Public Schools provides your child(ren) with the most effective web-based tools and applications for learning and uses several computer software applications and web-based services, operated by third parties. [redacted] uses Google Apps for Education and other web-based resources (i.e., Canvas, Zoom, and Flipgrid) for students. For our students to use these programs and services, certain personal identifying information -- generally the student's name and email address -- must be provided to the website operator.

Under federal law, entitled the Children's Online Privacy Protection Act (COPPA), these websites must provide parental notification and obtain parental consent before collecting personal information from children under the age of 13. However, the law permits school divisions to consent to the collection of personal information on behalf of all its students, thereby eliminating the need for individual parental consent given directly to the website operator. A list of the possible sites to be used in our classrooms, with links to their privacy policies and terms of services, can be seen below.

If you have any questions, please contact your child(ren)'s principal. As always, thank you for your continued support of your student's success.

Here is a list of COPPA information sites.

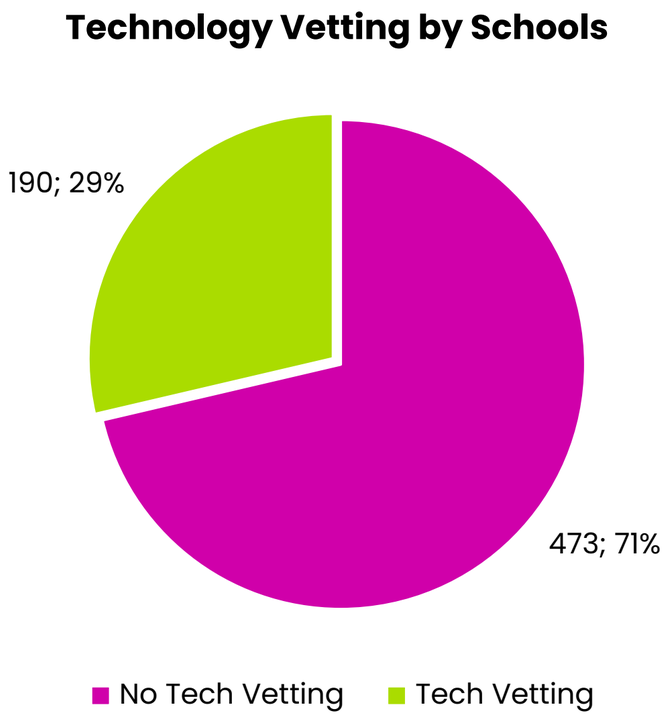
COPPA Sites : Sheet1

Mobymax	https://www.mobymax.com/
Moma Art Lab	https://www.moma.org
Moodle	https://moodle.org/
Mr. Nussbaum	https://mrnussbaum.com/
Mrs. Lodge's Library	http://www.mrs-lodges-library.com/
MSNBC	https://www.msnbc.com/
MSTAR/ESTAR	https://estarmstar.org/
Multiplication.com	https://www.multiplication.com/
Music Dictionary	https://www.classicsforkids.com/music/musical_dictionary.php
Music First	https://www.musicfirst.com/

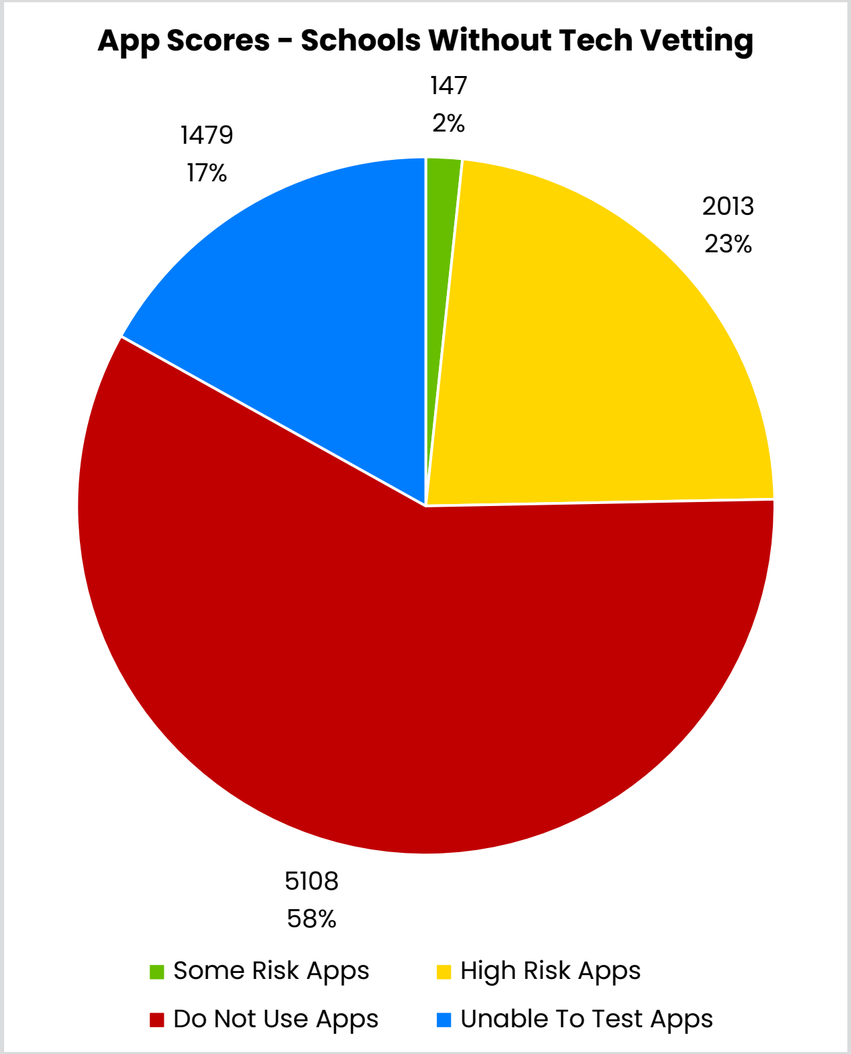
Sheet1

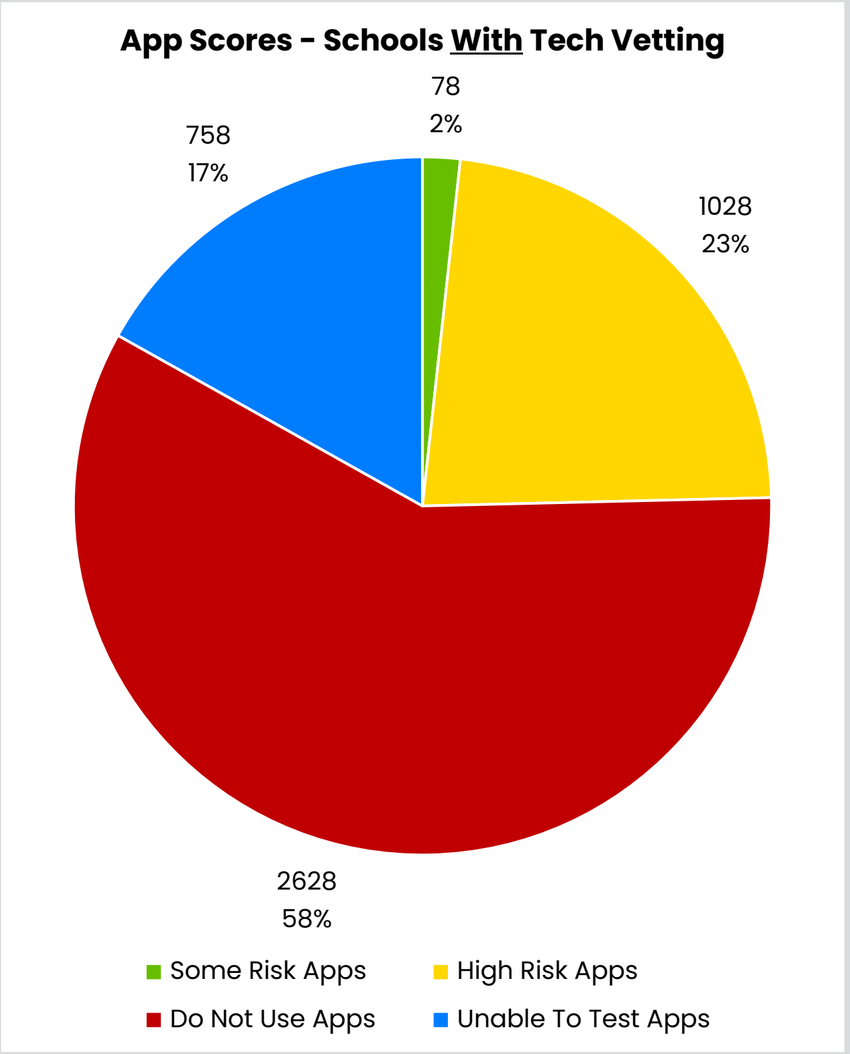
Example of LEA consenting on behalf of student for off the shelf technologies.

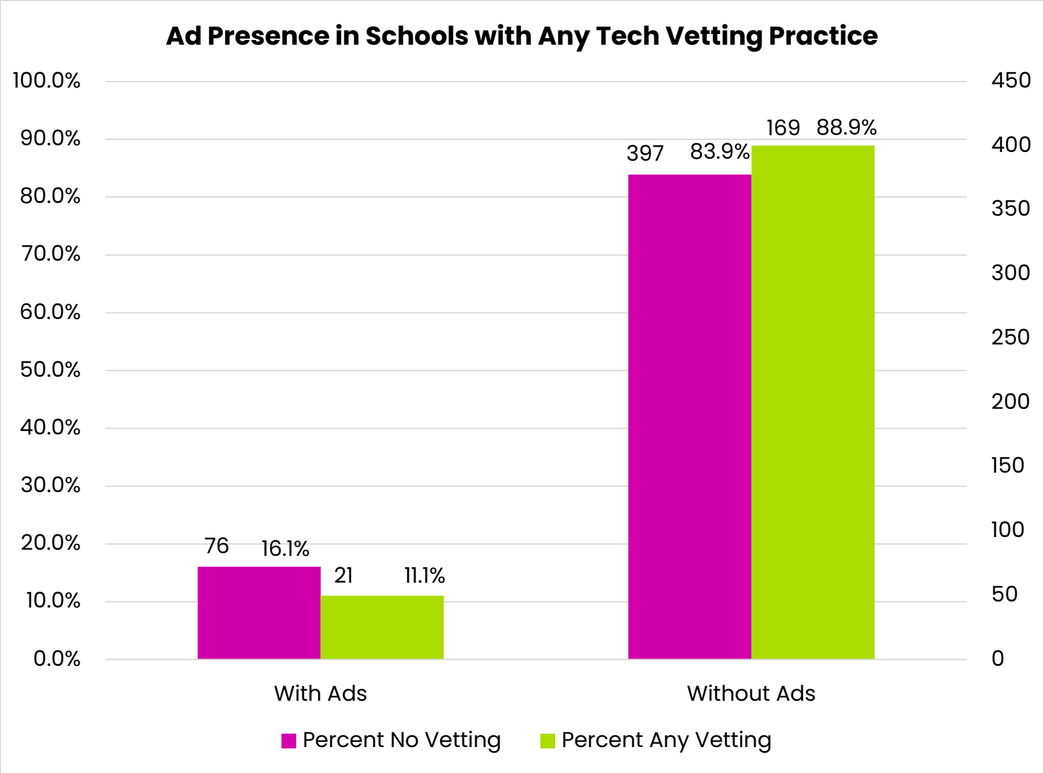
Vetting

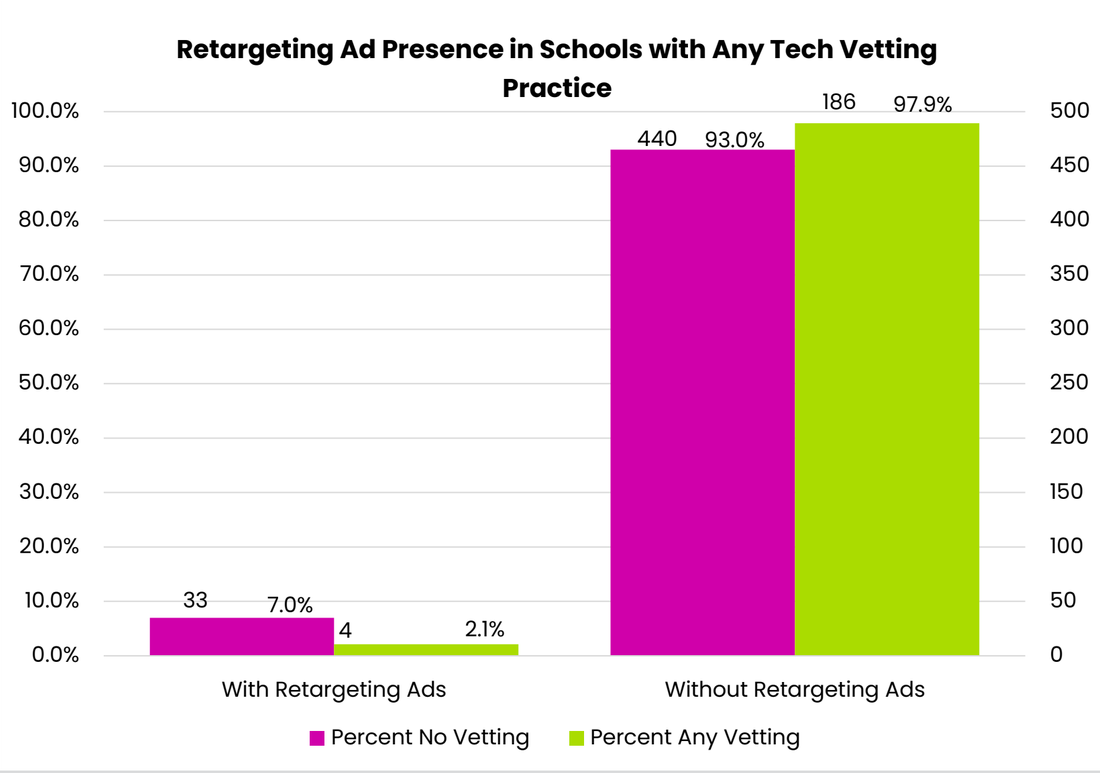


- **No difference** in ISL Safety Scores between schools that have systemic vetting of technology and schools that don’t.
- Somewhat **reduced** presence of ads.
- Schools with systemic vetting recommend/require **27.6% more technologies** to students.









Certifications & Promises

- Certifications
  - **COPPA Safe Harbor Certification***
  - **Proprietary Certifications**
- Promises
  - **Student Privacy Pledge 2020* (Future of Privacy Forum et al)**
  - **Data Privacy Agreements* – Student Data Privacy Consortium**

* Legally binding/enforceable

Apps with Certifications & Promises Analysis

- School Utility Apps (part of Community Engagement Platforms) are ***extremely unsafe and should not be certified or signing promises until they're made safer***.
- We excluded these apps from the analysis because of their distortive effect.
- Listed in Appendices B and C in the report.

Apps with Certifications & Promises Analysis [excluding CEP apps]

- The set of apps with any kind of certification or promise was **safer** than apps without.

ALL NON-CEP APPS	# Apps	Do Not Use	High Risk	Some Risk	Unable to Test	Ads	Retargeting Ads
ISL Benchmark	**1298**	**54.6%**	**15.1%**	**3.9%**	**26.5%**	**15.2%**	**8.9%**
Any Certification or Promise	431	51.5%	15.6%	3.0%	29.9%	7.9%	2.0%
No Certifications or Promises	867	56.1%	14.9%	4.3%	24.8%	18.6%	12.1%

COPPA Safe Harbor Certified Apps

- COPPA Safe Harbor certified apps had no retargeting [aka behavioral] ads, but performed **worse** on ISL Safety Score and presence of digital ads compared to both:
  - **The overall set of apps, and**
  - **The set of apps with NO certifications or promises.**

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CERTIFICATIONS							
All Certifications	93	63.4%	9.7%	0.0%	26.9%	16.2%	0.0%
ALL COPPA Safe Harbor Certifications	61	73.8%	9.8%	0.0%	16.4%	21.6%	0.0%
iKeepSafe	24	79.2%	0.0%	0.0%	20.8%	10.5%	0.0%
KidSafe	25	72.0%	16.0%	0.0%	12.0%	18.2%	0.0%
Privo	10	60.0%	20.0%	0.0%	20.0%	50.0%	0.0%
Proprietary							
1EdTech	40	40.0%	12.5%	0.0%	47.5%	0.0%	0.0%

Certified Apps

- 1EdTech, a proprietary privacy certification, resulted in the best safety metrics.

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Proprietary							
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Promises

- Promises performed better than certified apps on presence of digital ads and ISL Safety Score.
  - **But worse on retargeting ads.**

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PROMISES							
Student Privacy Pledge	158	38.6%	19.0%	3.8%	38.6%	2.1%	2.1%
SDPC	364	53.9%	16.2%	1.9%	28.2%	8.0%	2.3%
SELF-ASSERTED COPPA COMPLIANCE							
Self-Asserted COPPA Compliance Only	239	55.7%	13.8%	1.7%	28.9%	11.2%	7.1%

Self-asserted COPPA Compliance

- Surprisingly, apps with self-asserted COPPA compliance were better than apps with no certification or promise.
- And better than total sample for ads and retargeting ads

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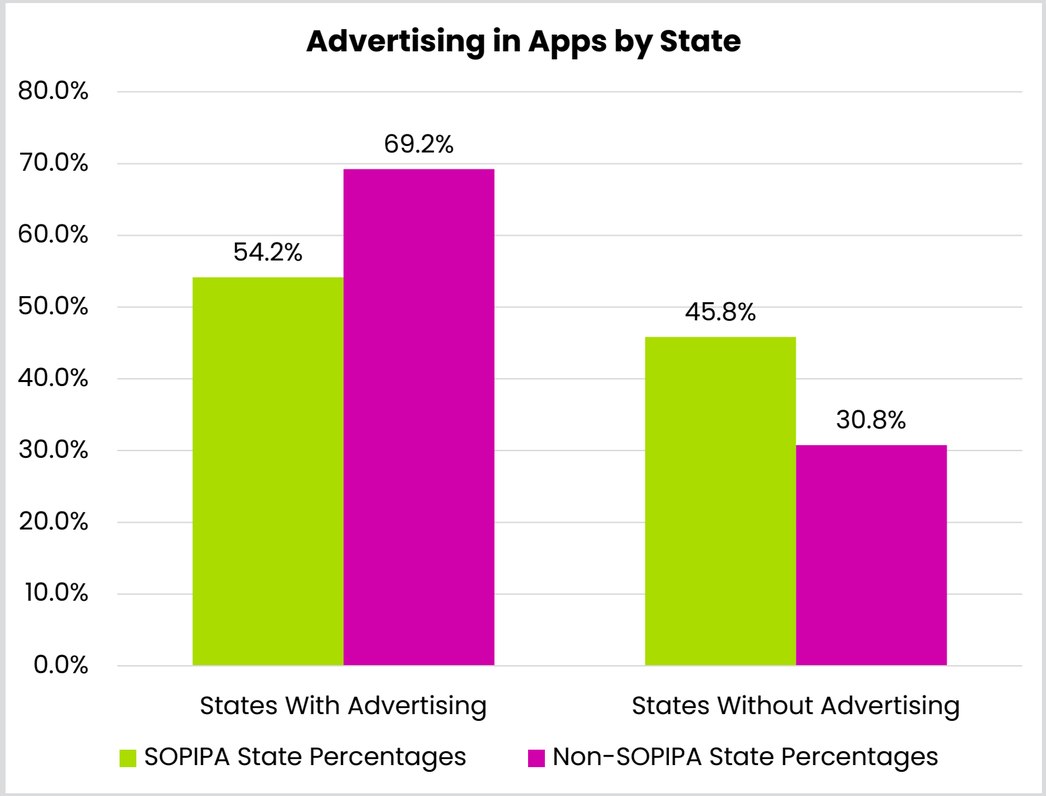
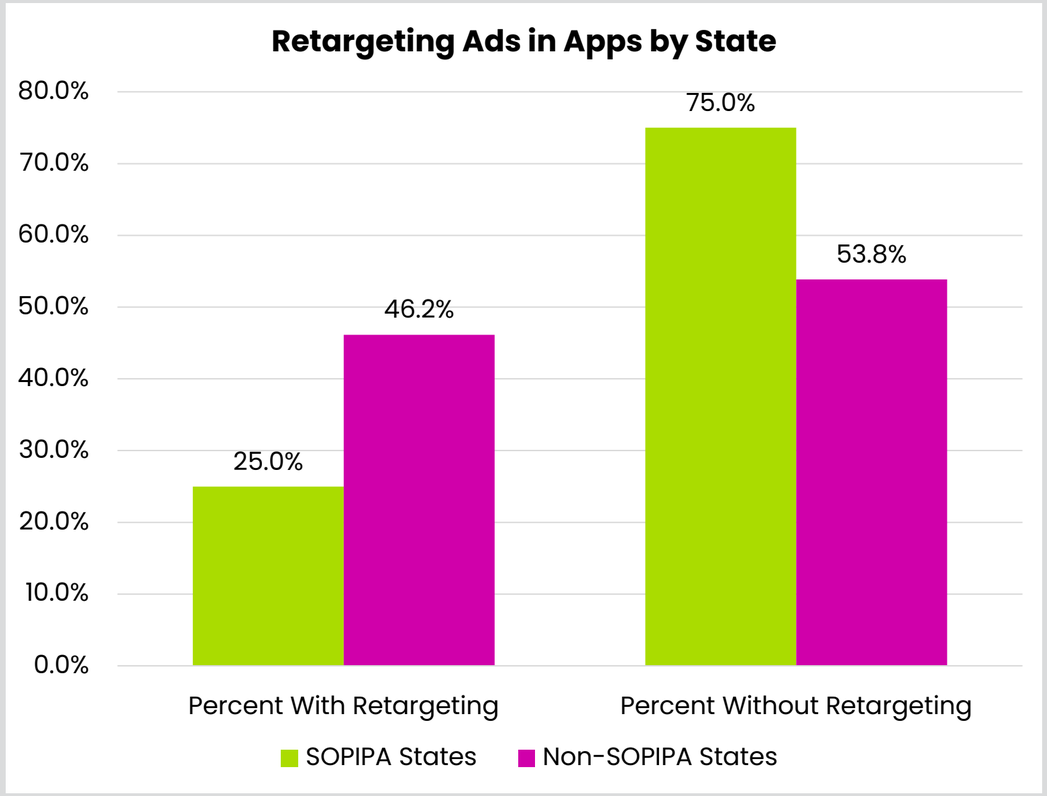
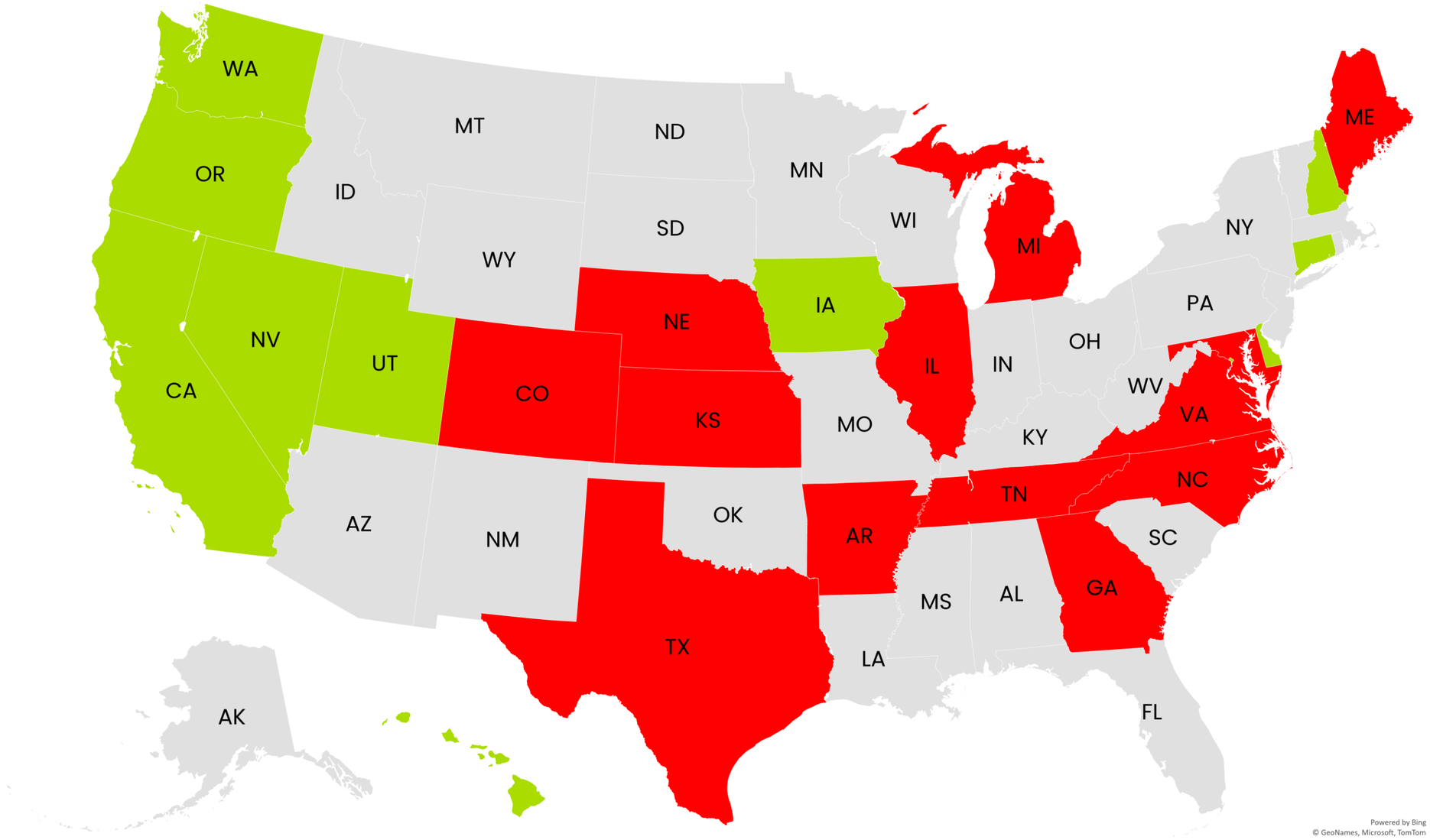
SOPIPA

- States with SOPIPA-like laws saw improvement—but not complete elimination—of retargeting/behavioral ads.
  - **Caveat: this is anecdotal/informational only, as our sample was not designed to measure this.**

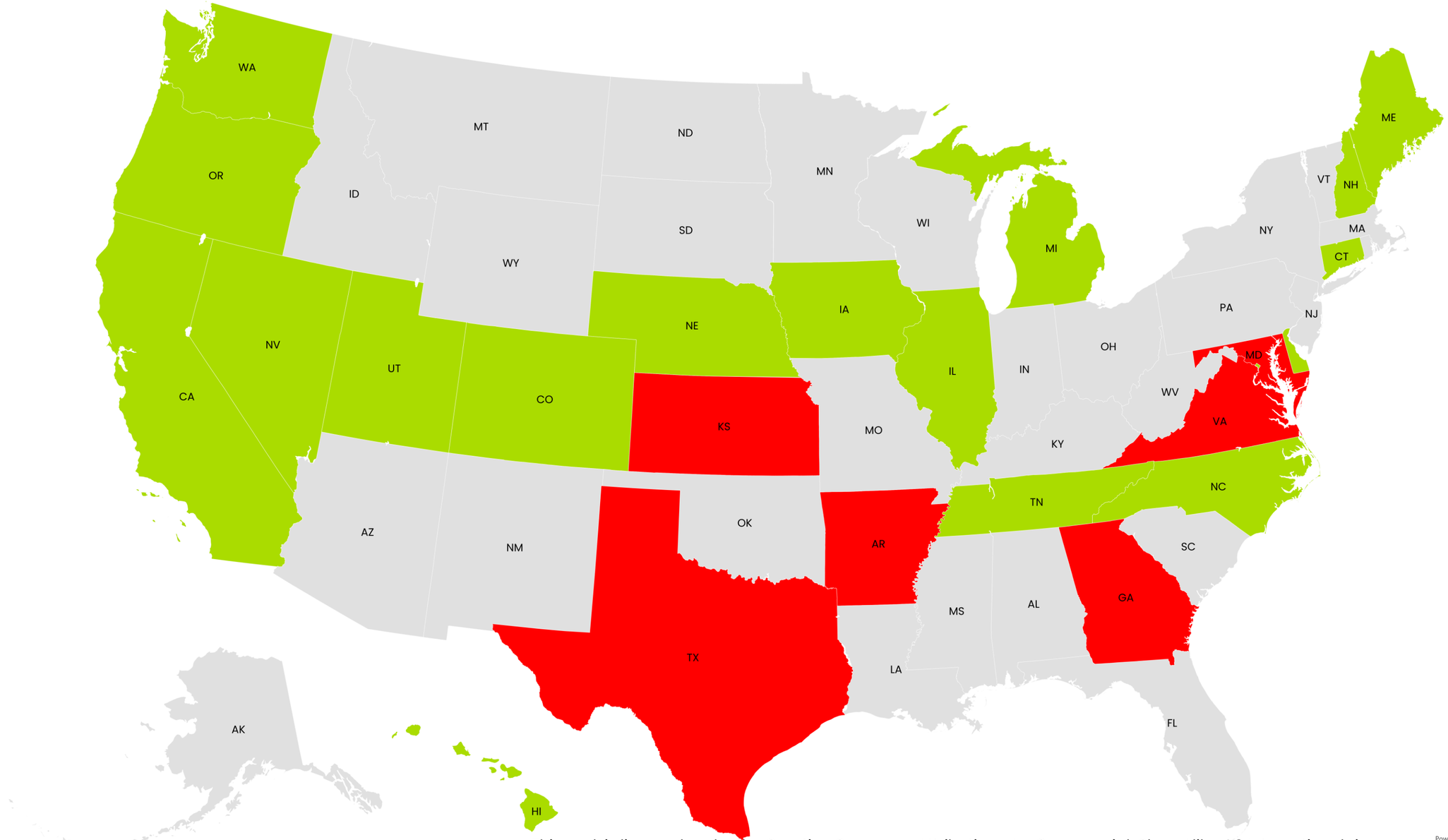




Advertising in SOPIPA States - Observed [red] and Not Observed [green]



Retargeting Advertising in SOPIPA States - Observed [red] and Not Observed [green]



Thank You!