From: Lubo Malo </O=THEFACEBOOK/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=LMALO701>
To: Tim Harris; Thomas O'Day; Lubo Malo
Sent: 5/7/2019 6:50:39 AM
Subject: Message summary [{"otherUserFbId":null,"threadFbId":2160055437420274}]
Attachments: Web_Review_Summary_TODv3.pptx

Thomas O'Day (5/07/2019 01:37:03 PDT):
>Morning folks!

Thomas O'Day (5/07/2019 01:37:56 PDT):

shared: Web_Review_Summary_TODv3.pptx

Thomas O'Day (5/07/2019 01:38:02 PDT):
>Please do not share the deck any further - some LRP data in there

Thomas O'Day (5/07/2019 01:38:15 PDT):
>Can you please send me some feedback

Lubomir Malo (5/07/2019 06:50:39 PDT):
>I will send over feedback tomorrow morning

lay

Web Analysis

H1 Marketplace Review

AGENDA

1. FINANCIAL UPDATE
   Top down for Mobile Web and Desktop

2. MARKET SIZING
   Bottom up for Mobile Web and Desktop

3. FUTURE GROWTH OPPORTUNITIES
   Organic growth vectors

4. COMPETITIVE LANDSCAPE
   Density & competitor set

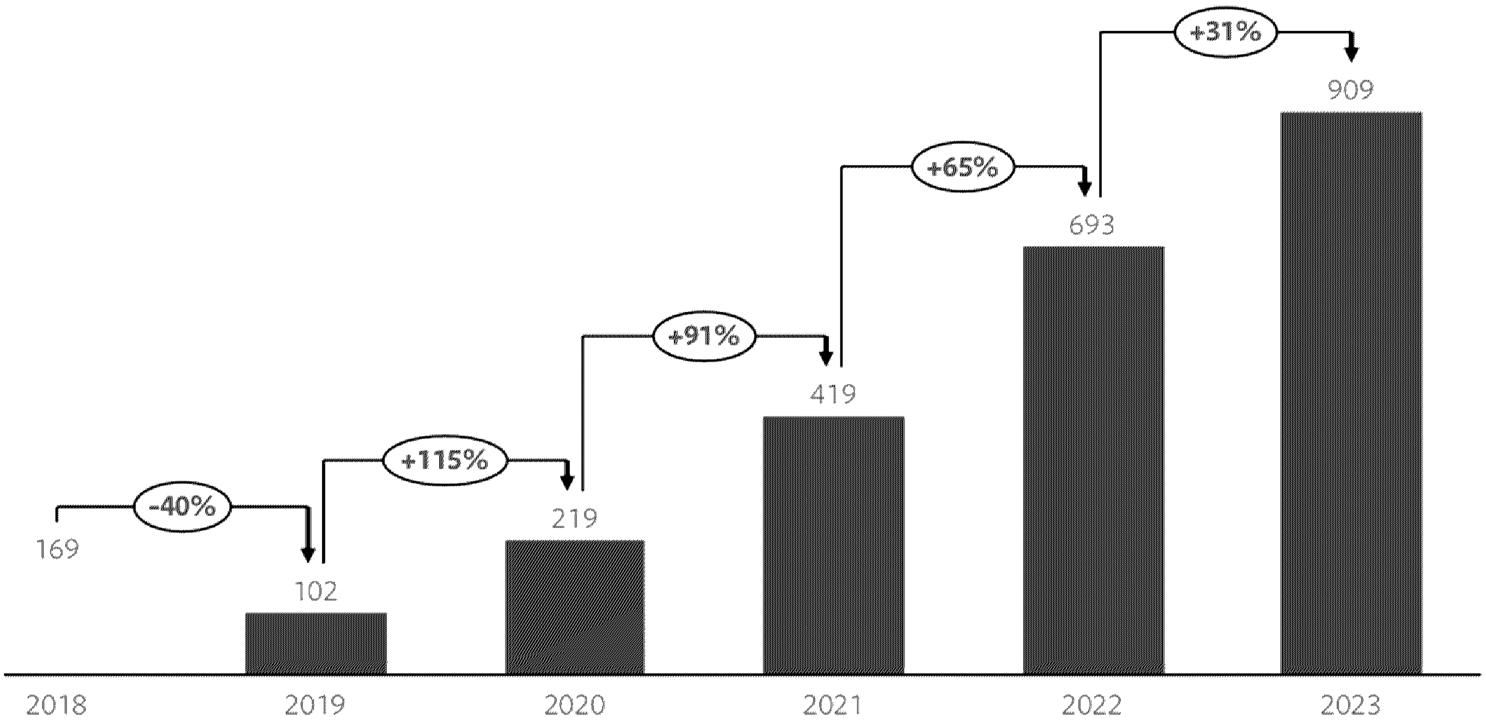
5. SUMMARY
   Prioritisation

No. 1

Financial Summary

eb growth is expected through Bidding & CPM
ıprovements

ɔLRP Forecast 2023



ɪrket Share	*1%*	*2%*	*4%*	*6%*	*9%*
: Share Adj*	*3%*	*6%*	*11%*	*19%*	*27%*
Margin	*17.5%*	*24.4%*	*30.4%*	*29.7%*	*29.3%*

CAGR

73%

Outlook assumes we able to fix the current competitive gaps and maintain/improve upo current win rates as v onboard new Web publishers in the sho term.

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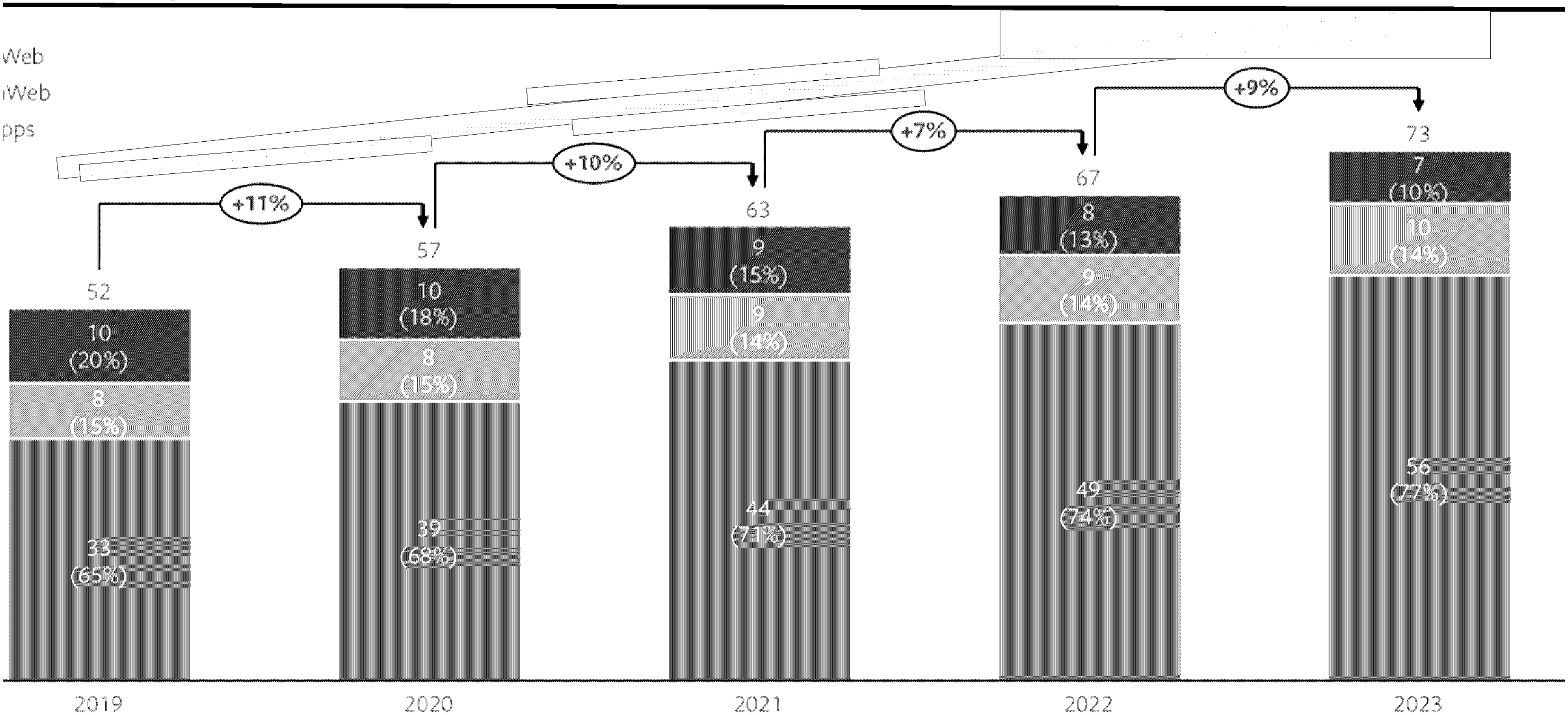
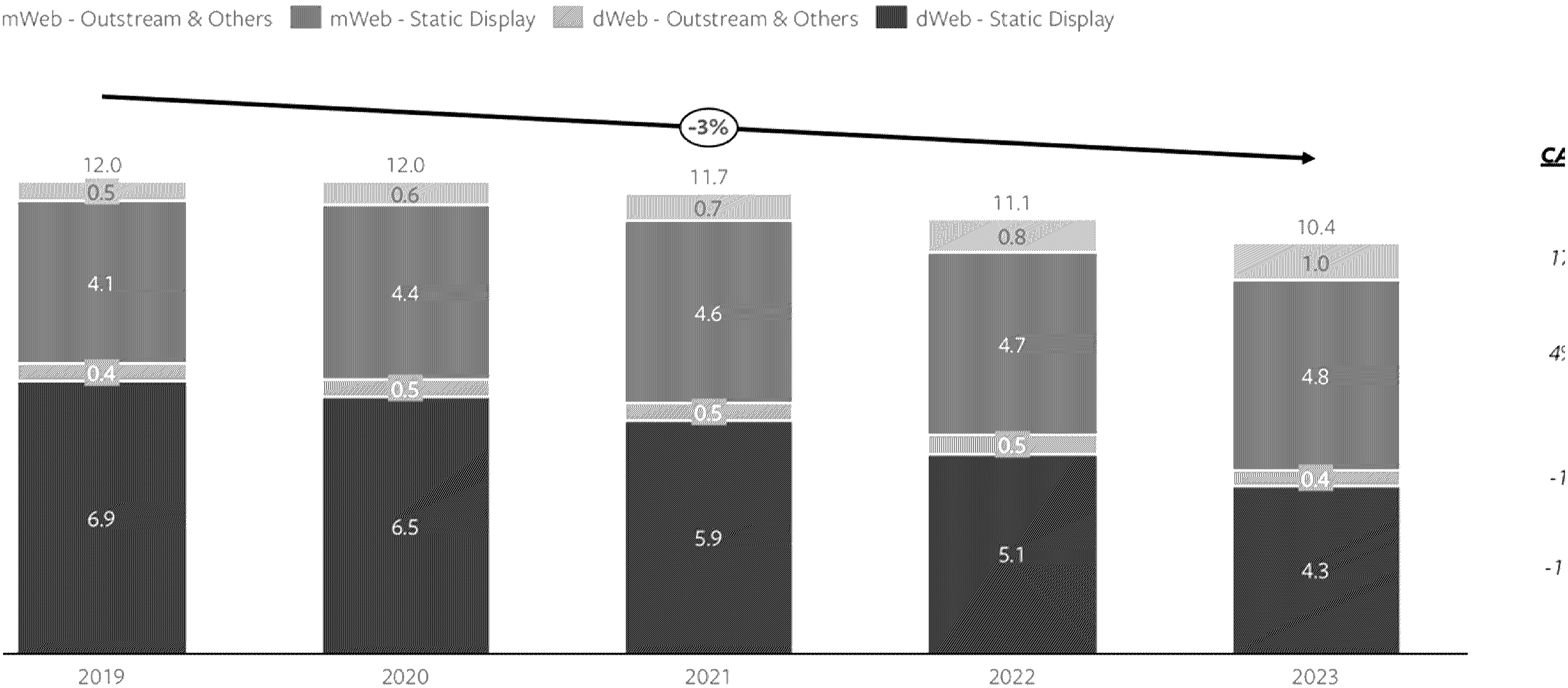


ce via IDC

obile Web will overtake Desktop in 2019

lressable Market Excluding In-Stream



ce via IDC

No. 3

Market Sizing

pressions-wise, market is ˜50-50 divided between
›bile web and desktop; desktop monetisation continu
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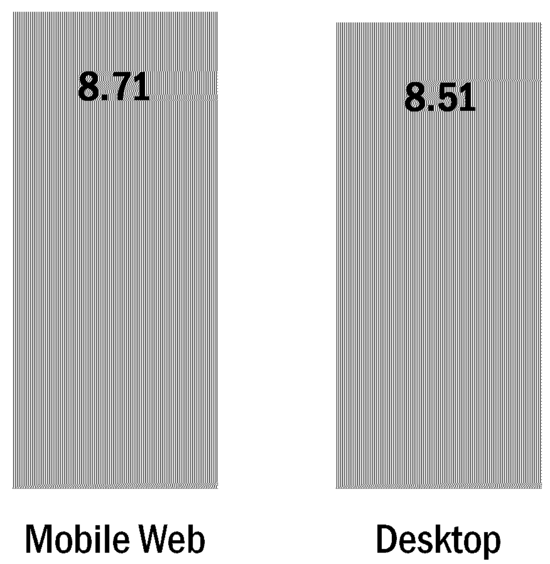
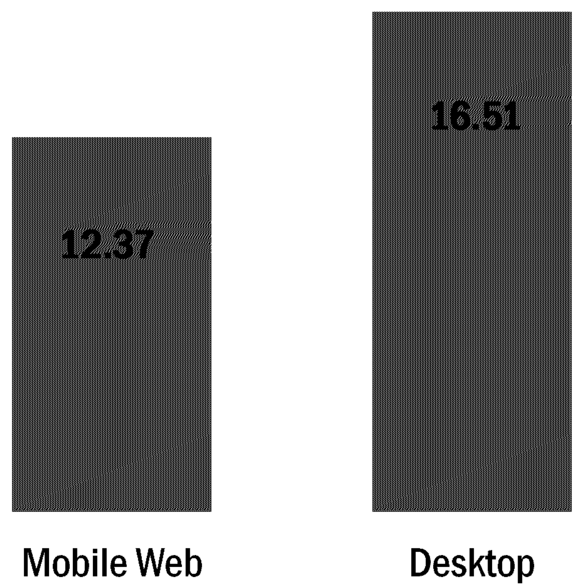
Impression (B) Annualized



17.200B – unique imps

Revenue ($B) Annualized



$29B – total market

Add Slide
traje

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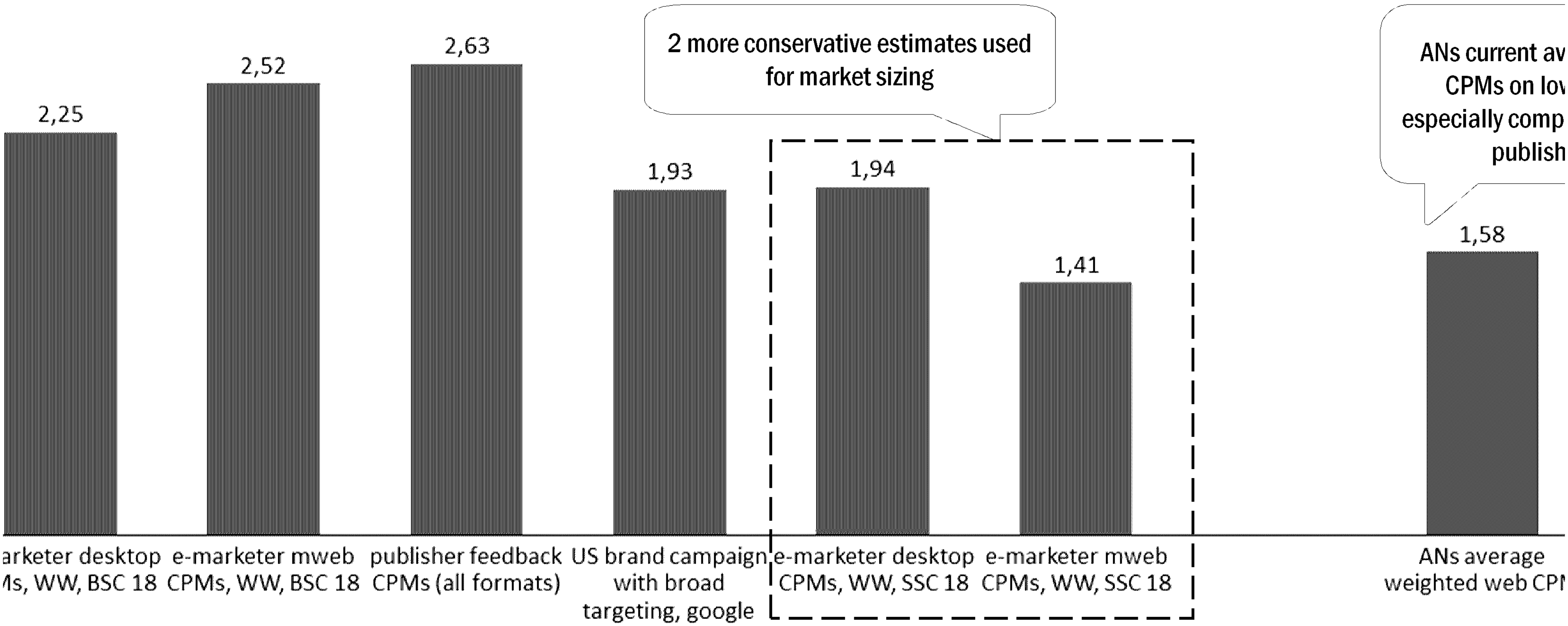
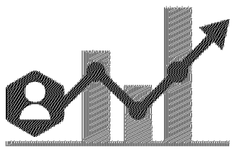


- buyer side, SCS – seller side

No. 3

Future Growth Opportunities

ways to view the Web opportunity for the Audience etwork



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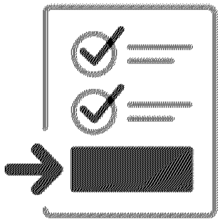
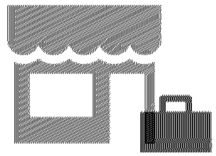
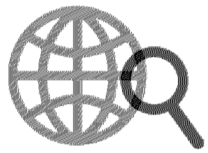


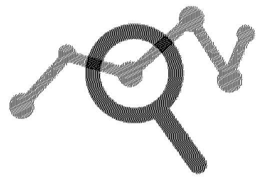
2. New Ad Formats



3. Supply Access



4. Geographic Expansion



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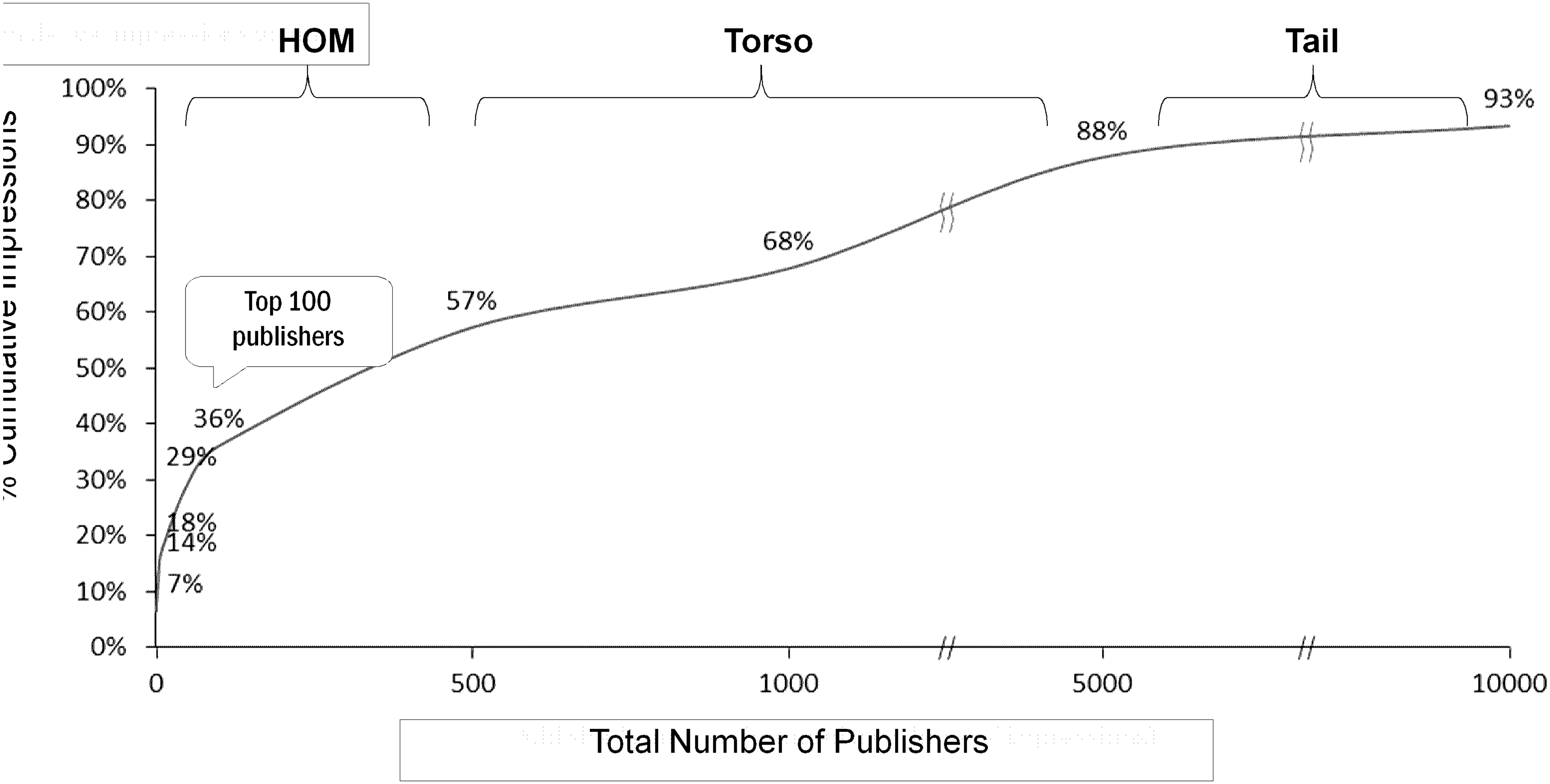

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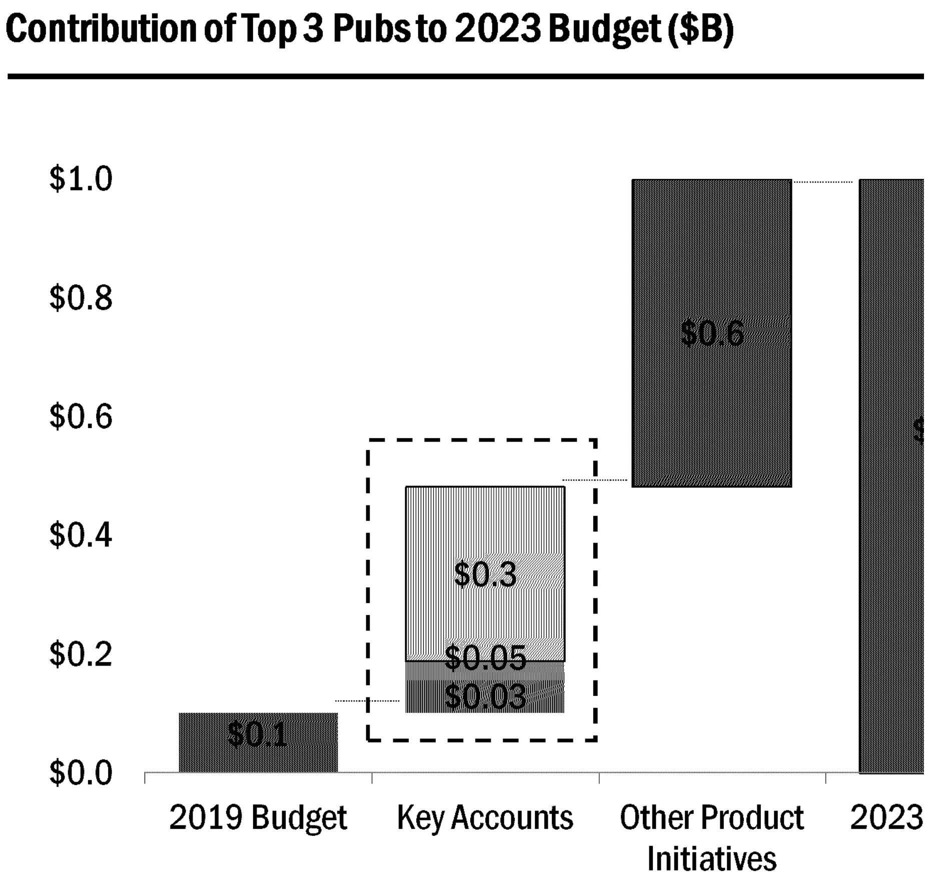

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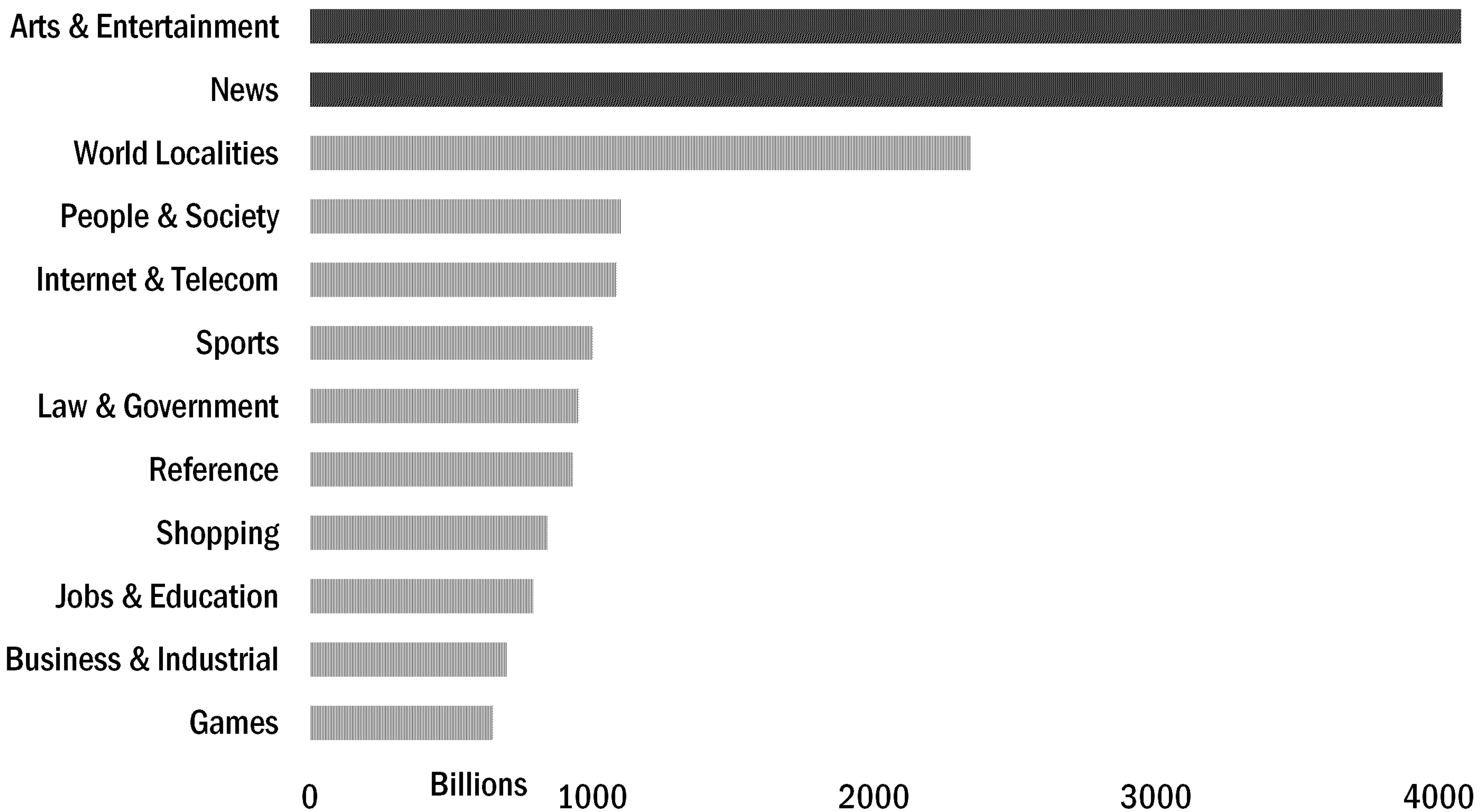

Add tier (H
Cate

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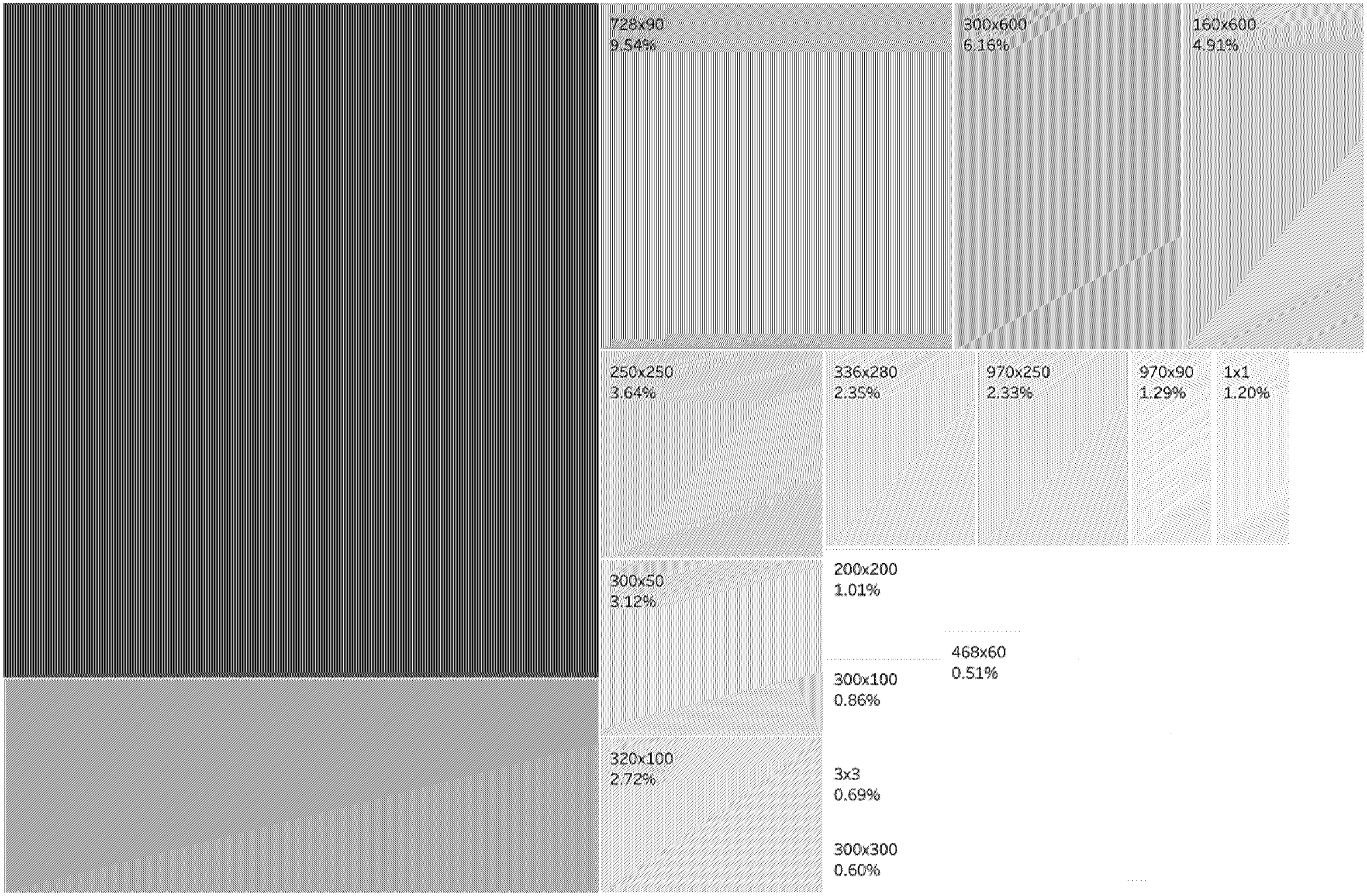

**Creatives sizes: %
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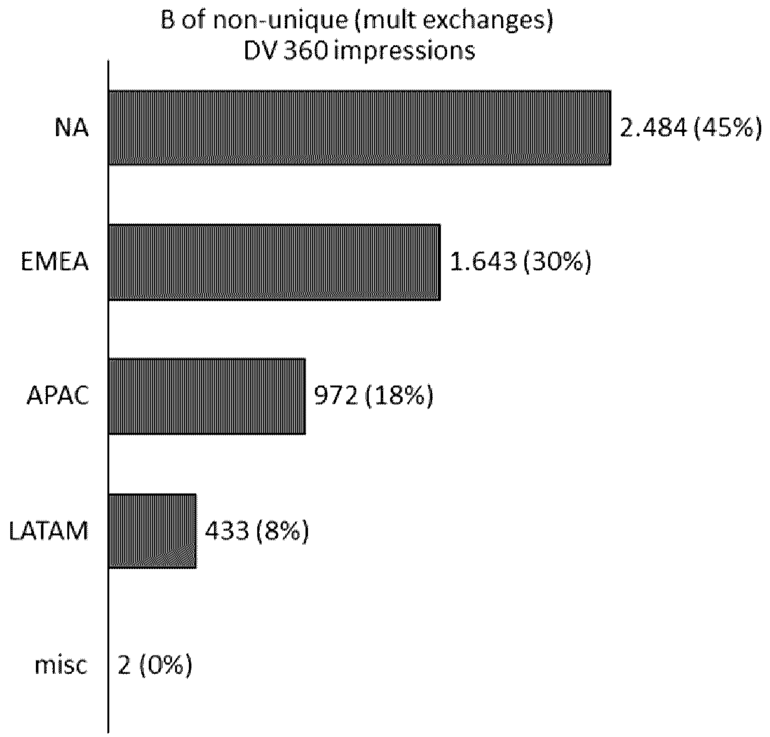
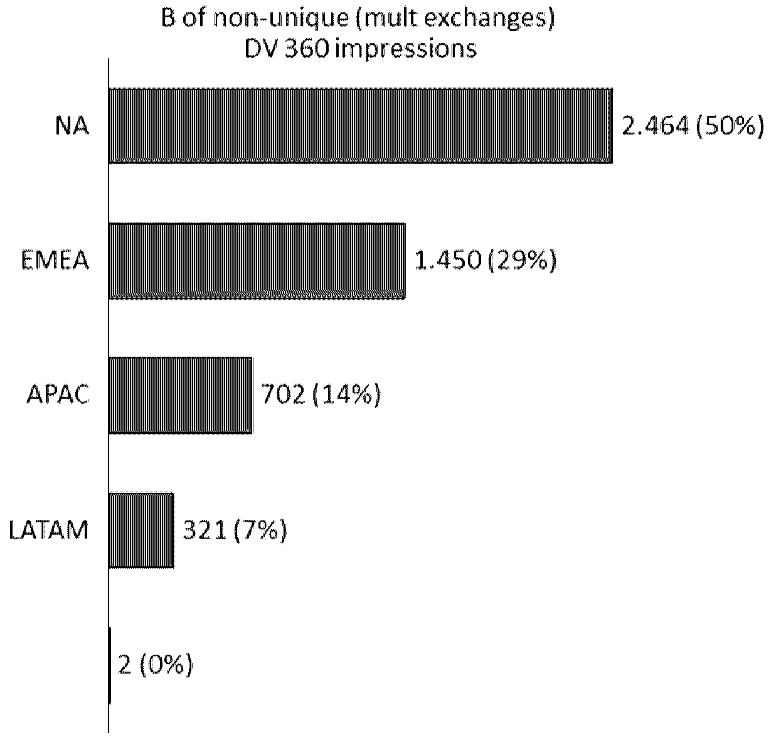


Desktop



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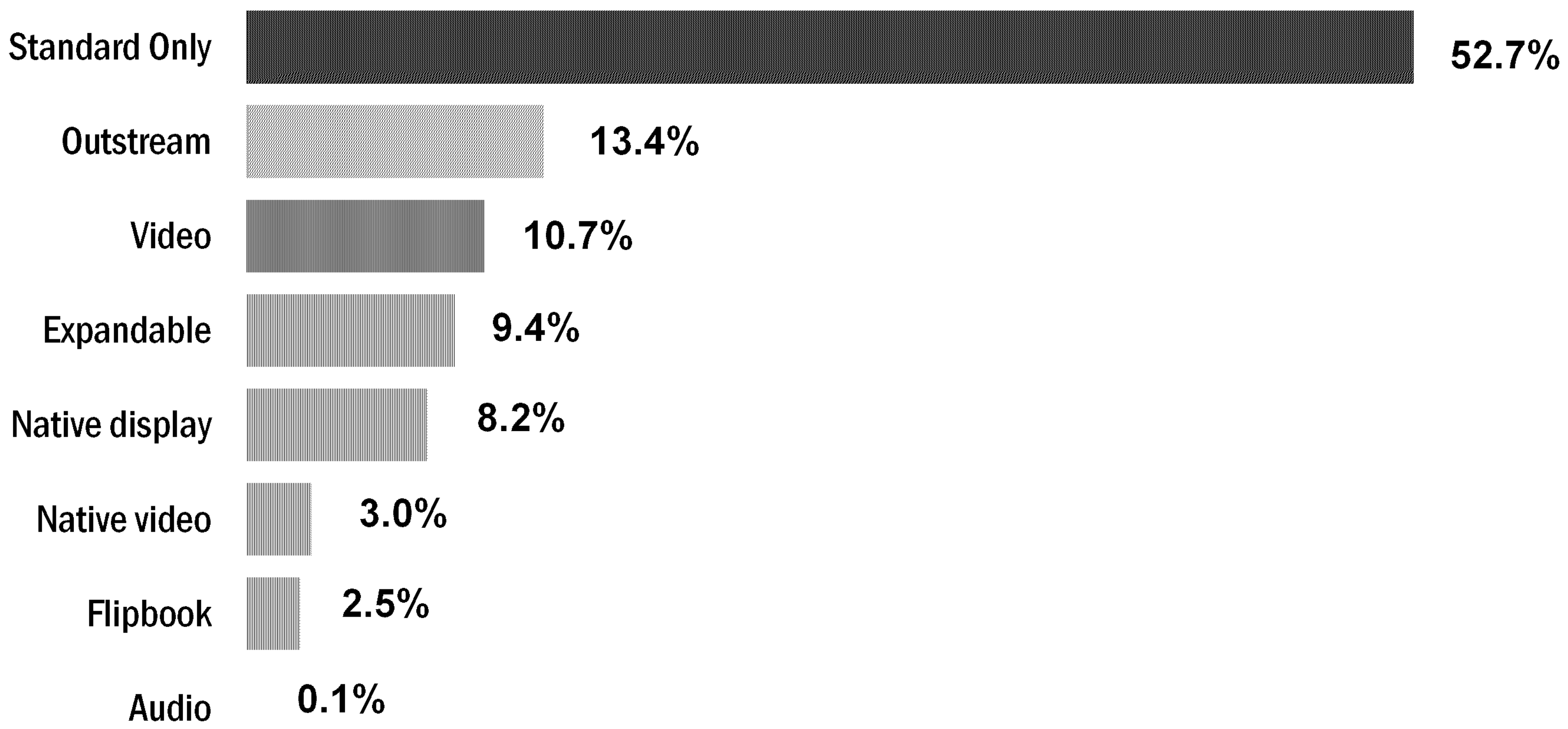
Mobile Web Impressions



Add re

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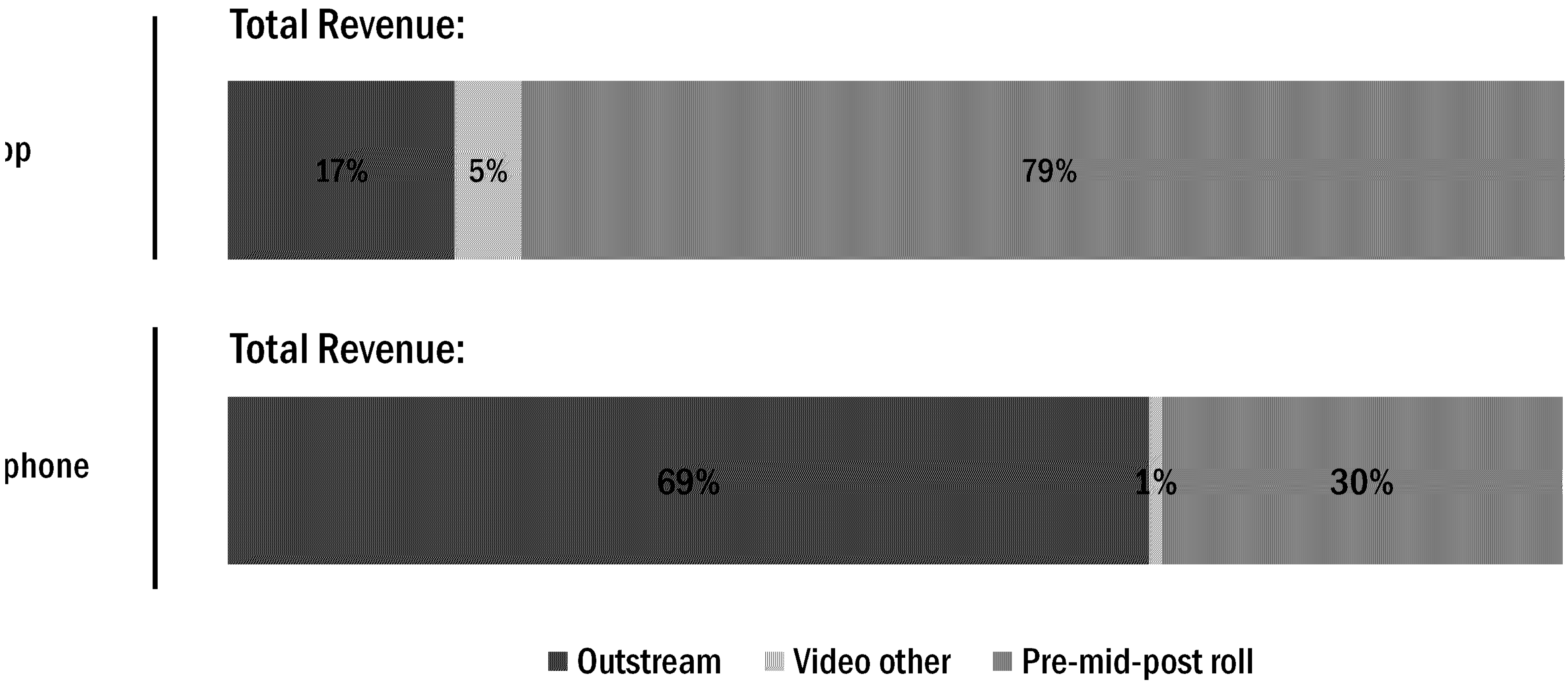

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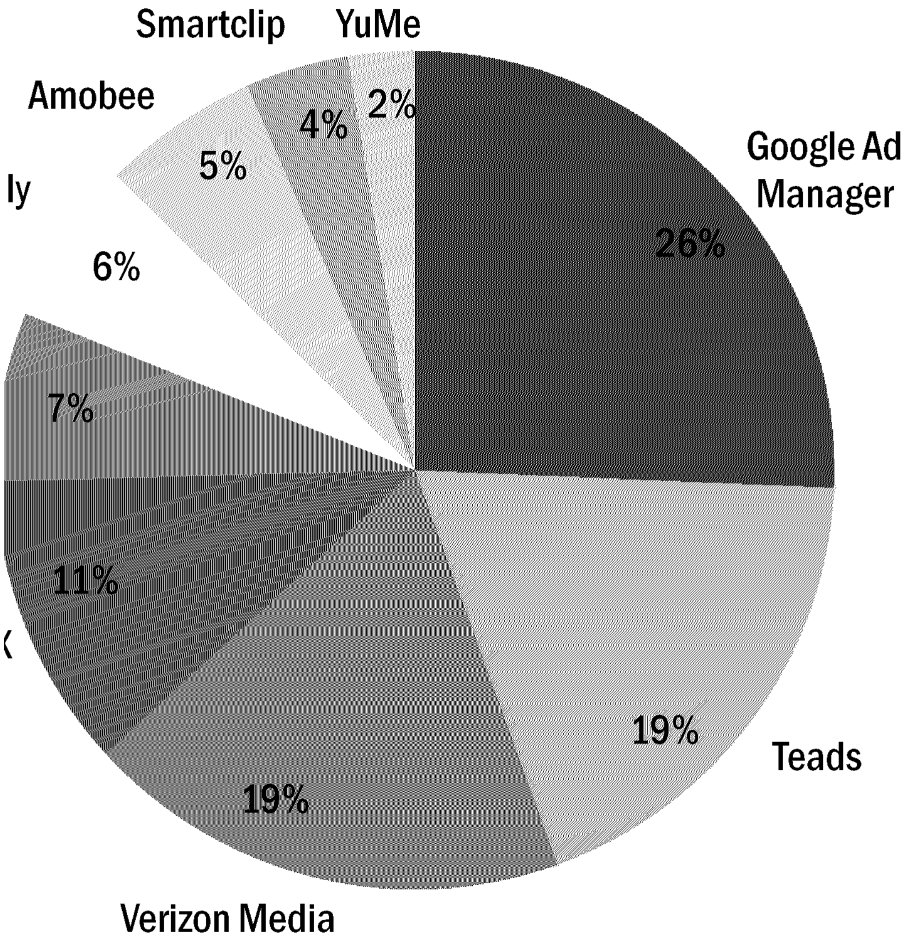

Emarketer Video & Display Metrics (2018) and Comscore AdMetrix Video (Mar 2018)

Trend: media owners buying Outstrear ad tech vendors for greater inventory control & transparency

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Key announcements

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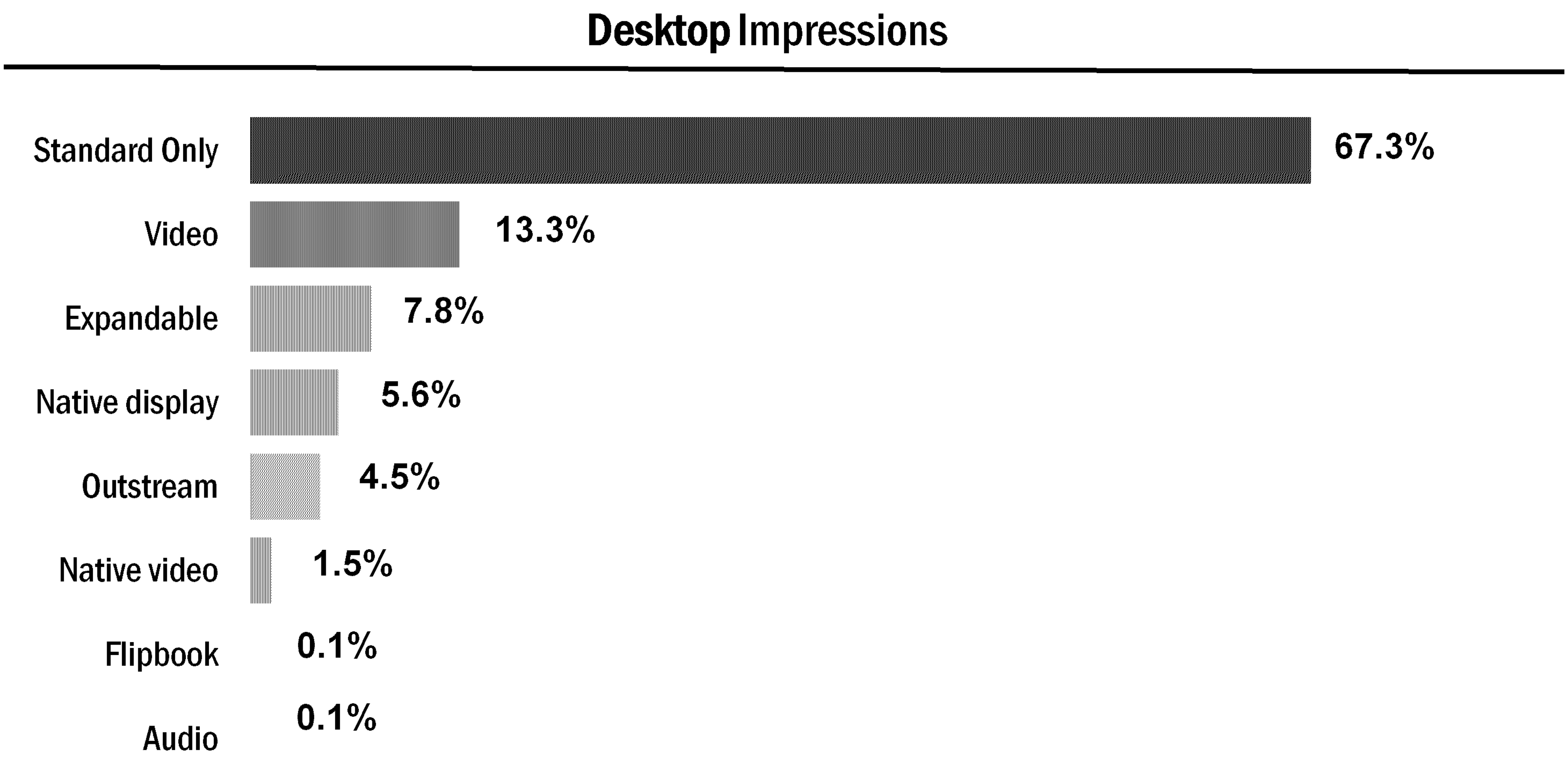
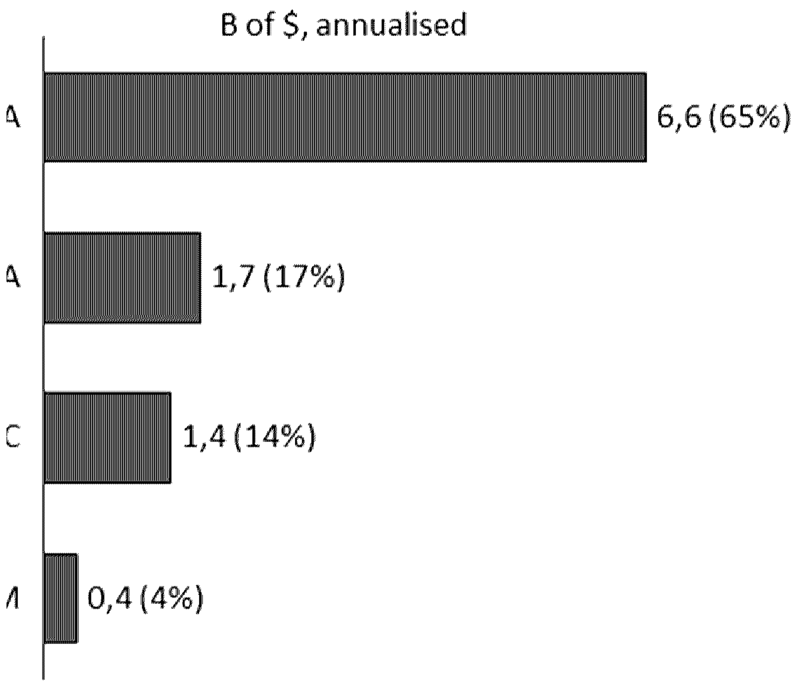
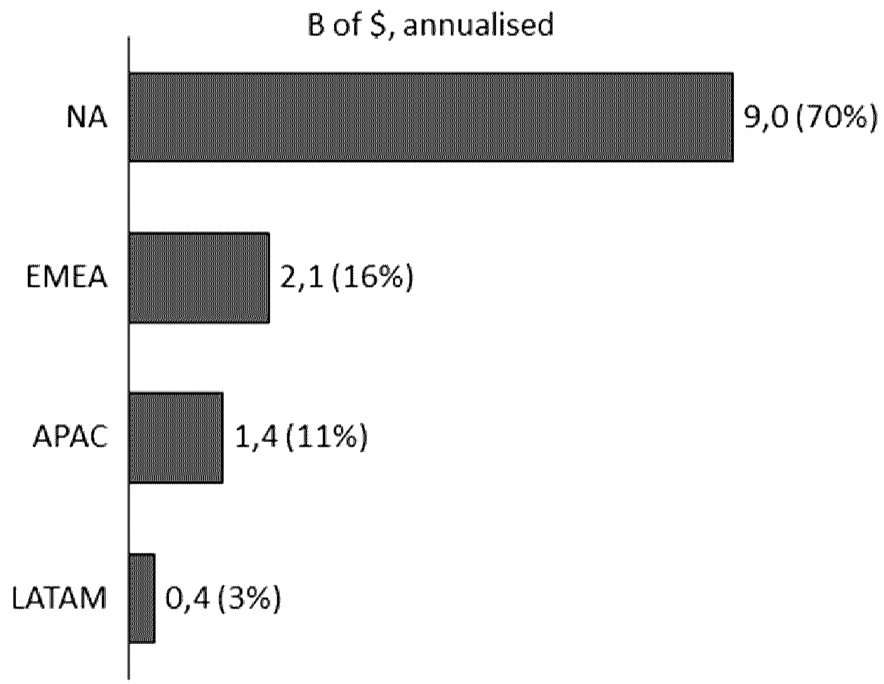


wise NA presents the biggest opportunity at 65-70% c
e market: $6.6B for mobile and $9B for desktop

le



Desktop



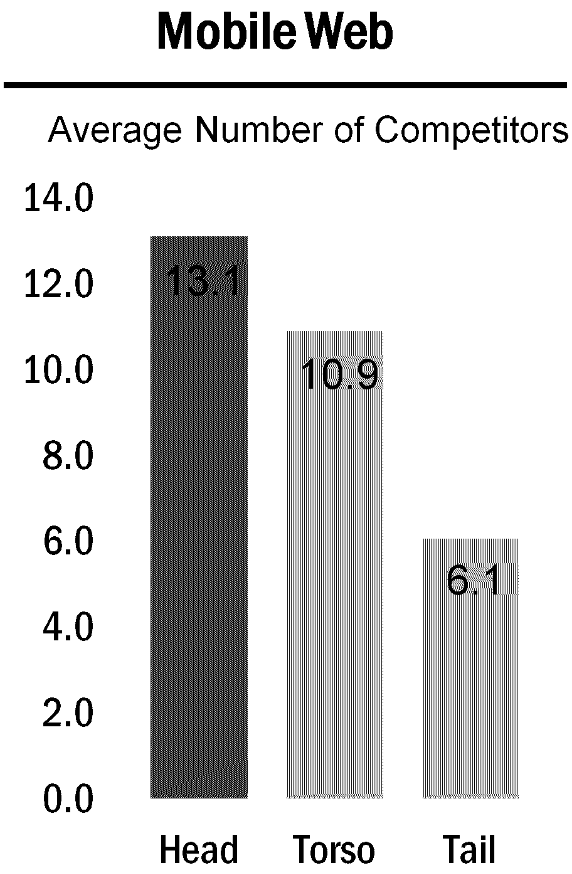
rent regions, scaled FAN CPMs were used

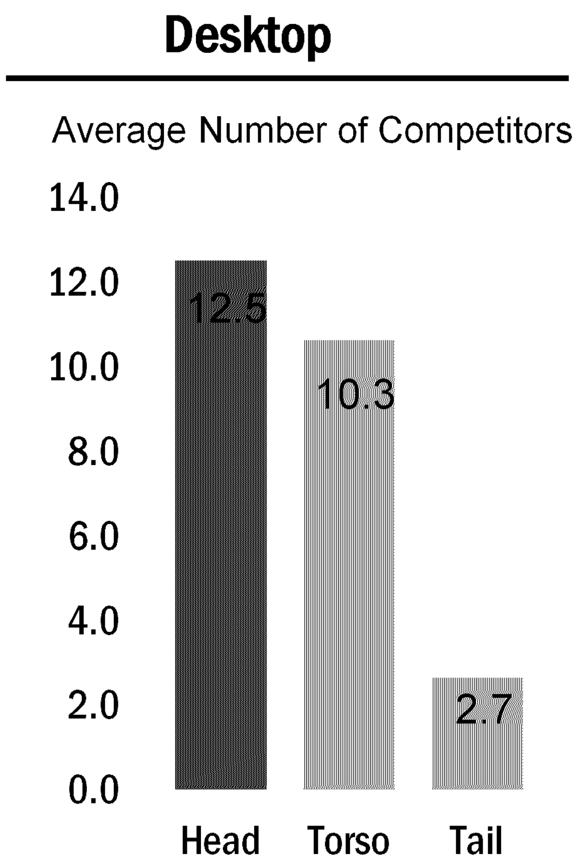
No. 4

Competitive Landscape

ense Competition in Head & Torso with +10 exchange egrated

% more demand sources competing for Mobile Web inventory than on App





Note: Data is based on DV360. Average number of competitors is the volume of programmatic exchanges accessing a publishers supply in each publisher tier. This could be either via a tag or parallel mediation

cess to Supply Is Now Ubiquitous

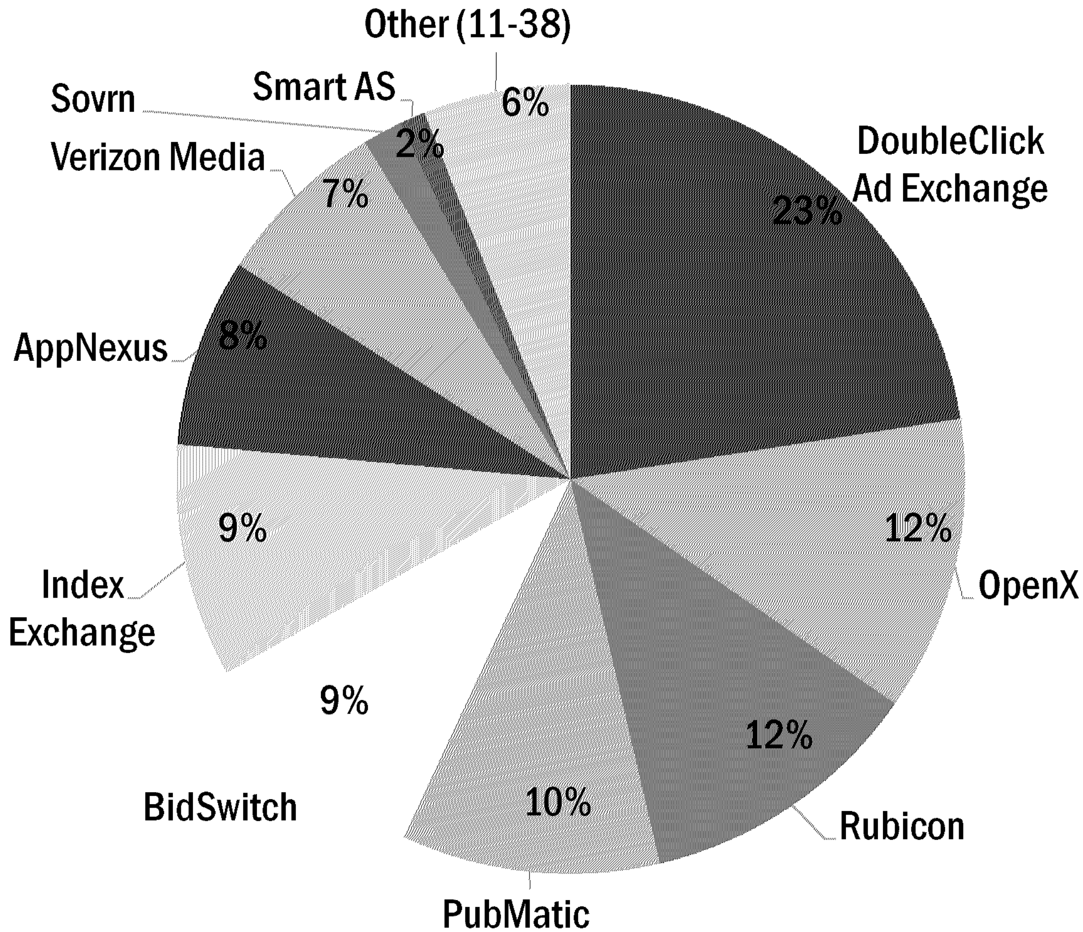
rview of Top Web Competitors

acy exchanges retain strong ıpetitive position in saturated ply marketplace

- $1.4B gross revenue
rentiation - Launched OpenAudience; people ɟ marketing solution partnering with LiveRamp, e and Lotame DMPs to compete with Walled en.

n - $1.5B gross revenue
rentiation – (1) Strongest independent PMP de. (2) Auction mechanics, specifically Estimated et Rate (EMR). Bid shading tool-kit designed to ise supply path for buyer & maximise win-rate for shers

– NA (estimated $1.8B)
rentiation – Access to premium publisher supply. ietary client-side container developed on top of d. Member of the governing body for Prebid and server-side container enabling better match rates



CONFIDENTIAL TREATMENT REQUESTED BY FACEBOOK, INC FBDOJ012408375

No. 4

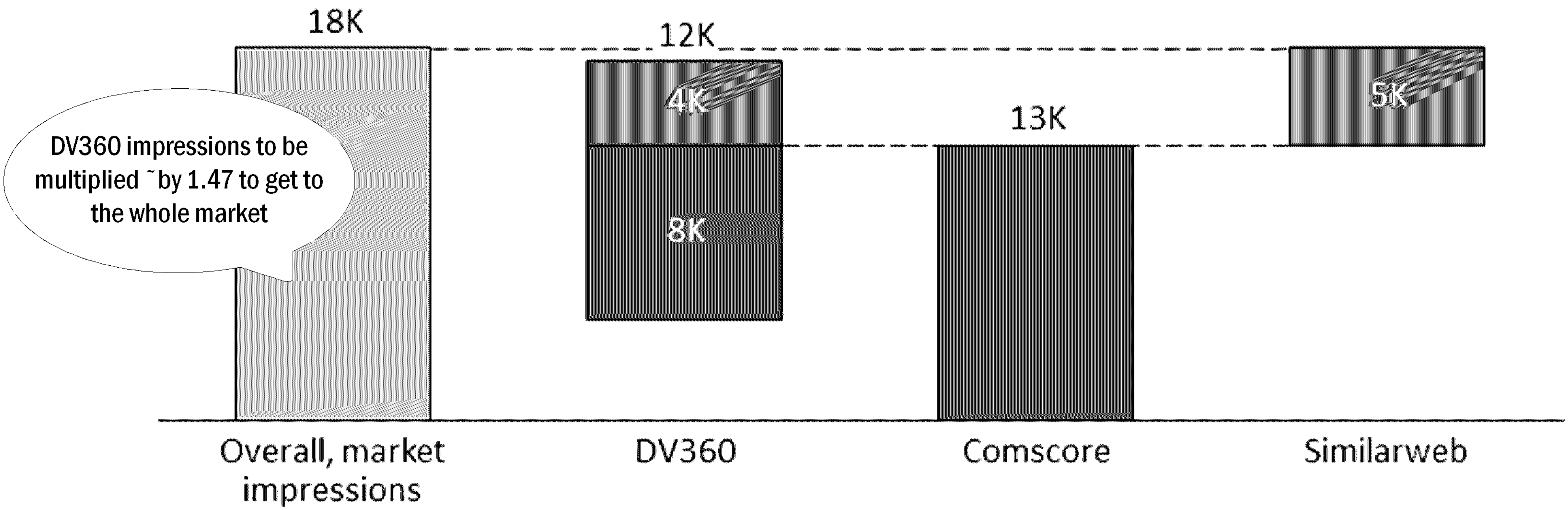
Appendixes

Tips and tricks

/360 impressions account for ~2/3 of the market – and ould be multiplied ~by1.5 to arrive at the whole marke

ematic, doesn't show Comscore and Similarweb overlap – even though it's accounted

mpressions, monthly



/ impressions, latest available month (April)
ethodology: Step 1: *For comscore X DV360 overlap, IM1: Σimpressions/Σpage views;* Step 2: *For unique comscore pubs, I1: Σpage views * IM1; Step 3: M1 = I1/ ΣDV360 impressions; Step 4: Calculate same M2 for similar web*
*ssions figure based on DV360, F, amalgamated market figure would be F * **(1+M1+M2)***
ıddressable sites

Natively Produced PowerPoint of

FBDOJ012408351

7 May

Web Analysis

H1 Marketplace Review

audience network by facebook

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   Top down for Mobile Web and Desktop

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   Density & competitor set

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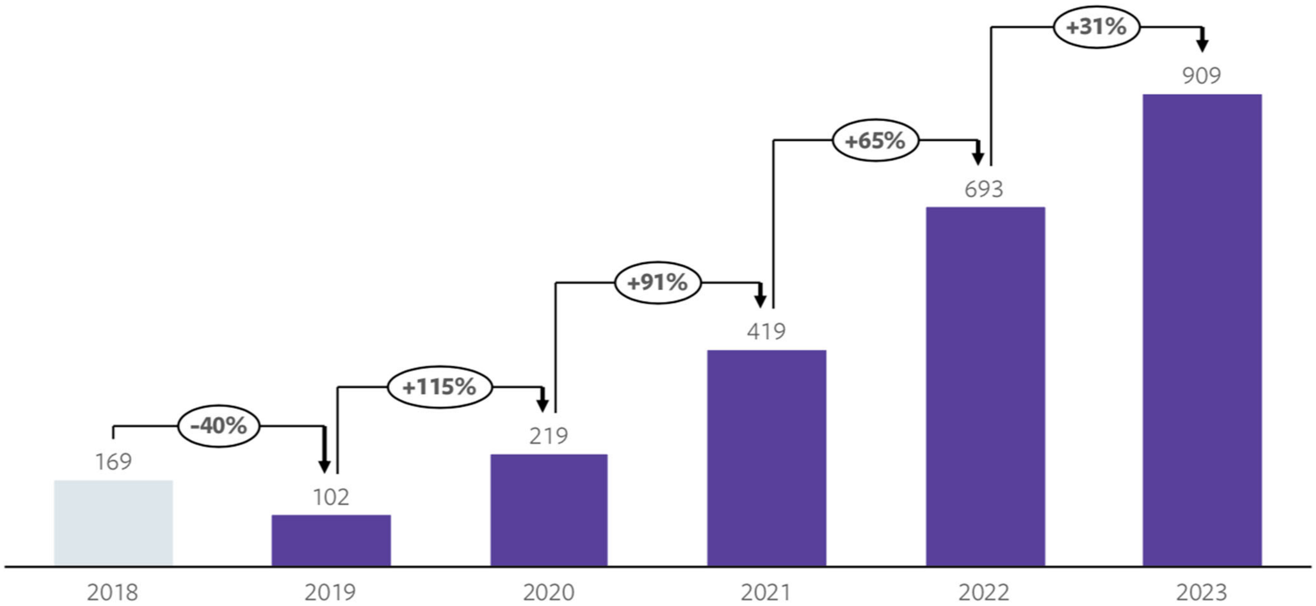
   Prioritisation

No.
1

Financial Summary

Web growth is expected through Bidding & CPM improvements

Web LRP Forecast 2023



Market Share	*1%*	*2%*	*4%*	*6%*	*9%*	
Mkt Share Adj*	*3%*	*6%*	*11%*	*19%*	*27%*	
Margin	*17.5%*	*24.4%*	*30.4%*	*29.7%*	*29.3%*	

CAGR

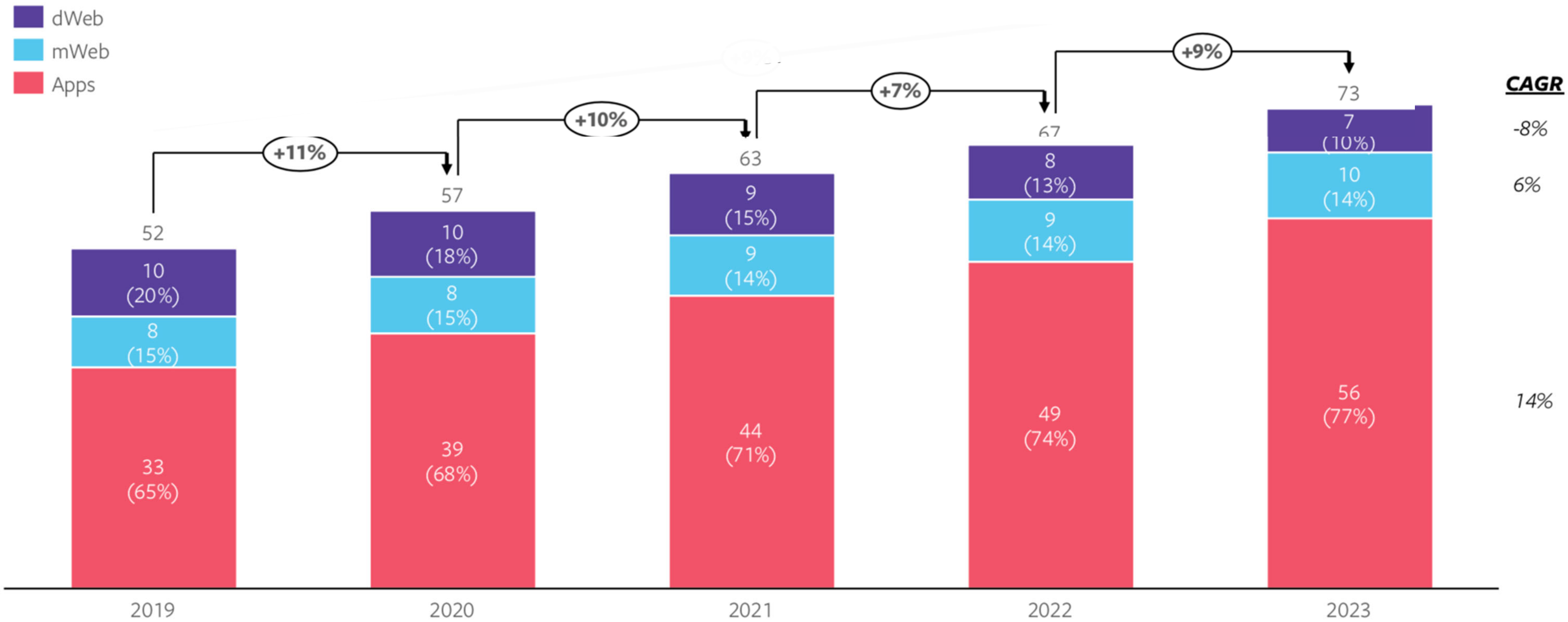
73%

Outlook assumes we are able to fix the current competitive gaps and maintain/improve upon current win rates as we onboard new Web publishers in the short-term.

Growth will largely expected to come from Bidding partnerships to gain access to net new publishers similar to App Non-Gaming and becoming a self-serve model. Model assumes no significant ramp in GTM

Mobile increases its share from 80% to 90% with Mweb +6% CAGR. Desktop expected to decline -8%

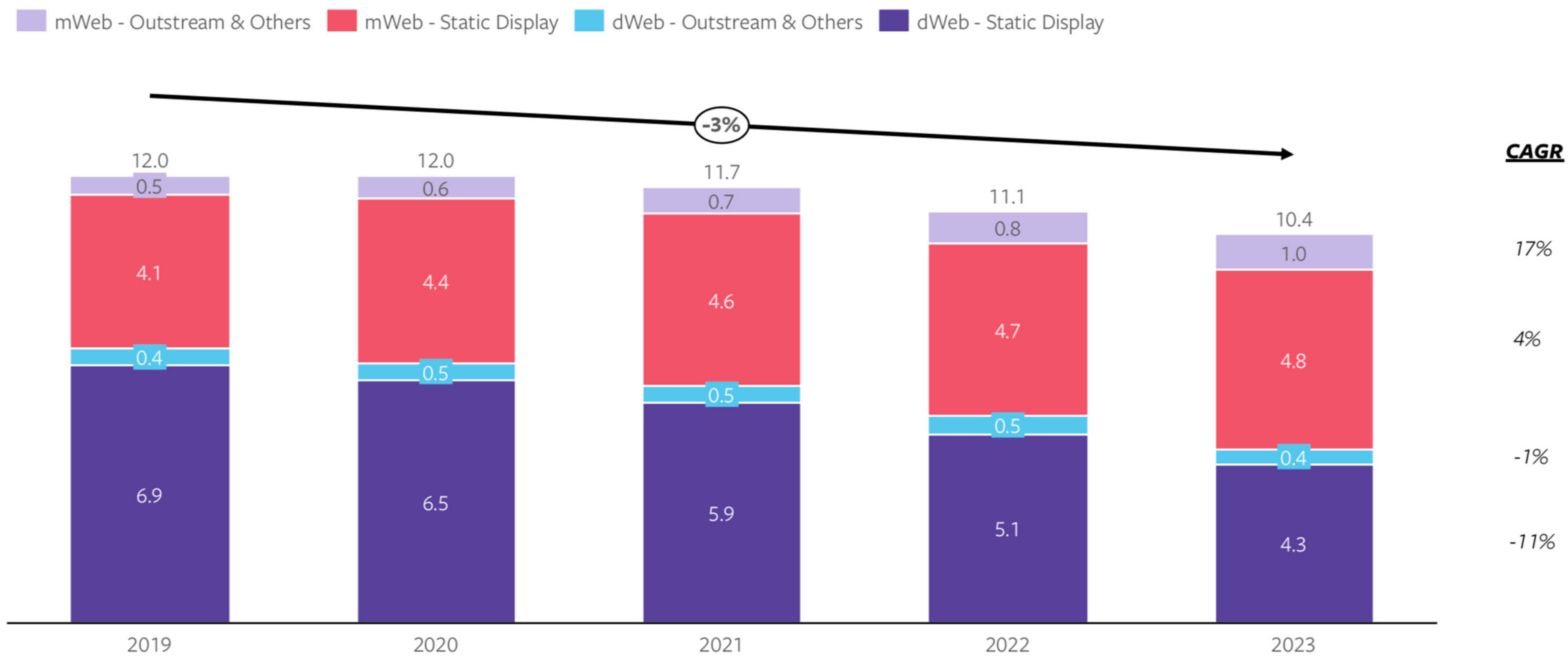
Publisher Ecosystems Ads Market by Surface



Source: Finance via IDC

Mobile Web will overtake Desktop in 2019

Addressable Market Excluding In-Stream



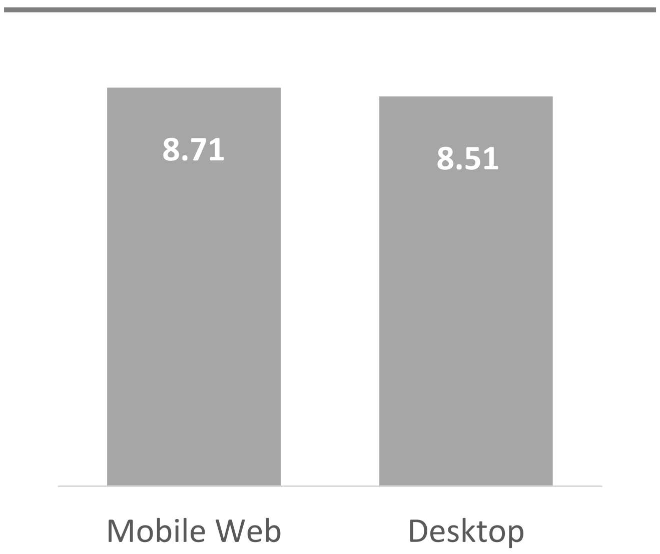
Source: Finance via IDC

No. 3

Market Sizing

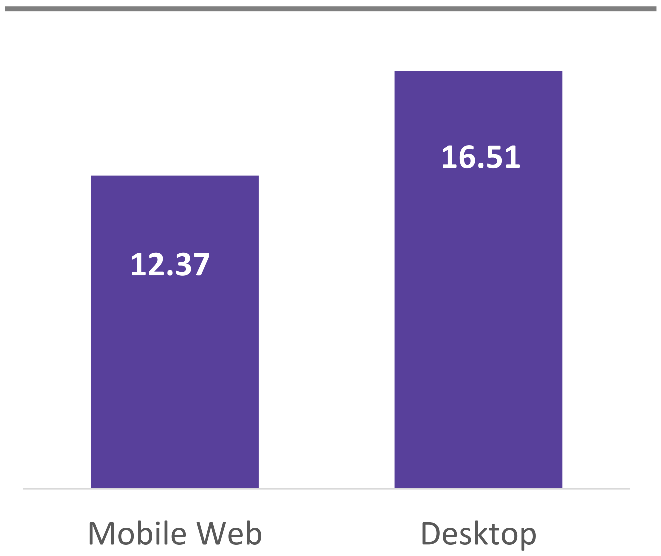
Impressions-wise, market is ~50-50 divided between mobile web and desktop; desktop monetisation continues to outperform web

Impression (B) Annualized



17.200B – unique imps

Revenue ($B) Annualized



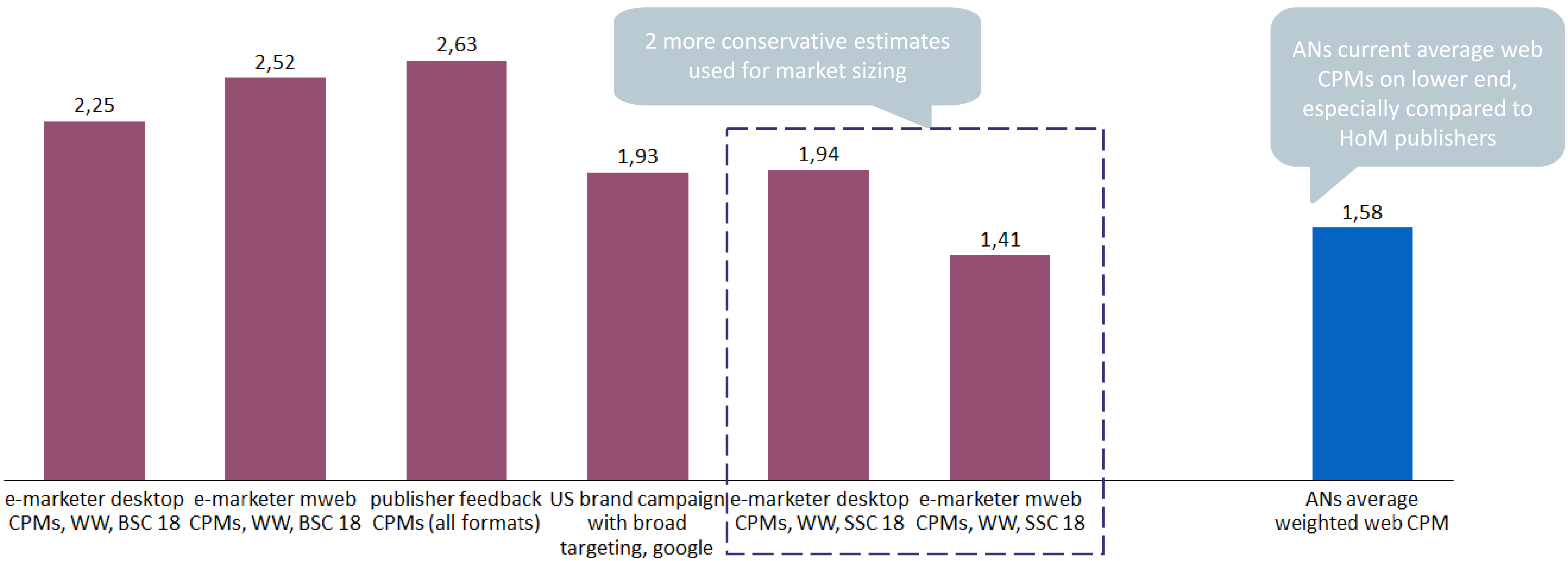
$29B – total market

Add Slide with 3 year trajectory

Source: CPMs – please see further slides, impressions – adjusted DV360 – please see further slides; to arrive at the unique impressions we are dividing the total numb er by the average weighted number of exchanges

The more conservative CPMs assumed for web: 1.94$ for desktop and 1.42$ for mweb

Available CPM benchmarks, $



Source: BSC – buyer side, SCS – seller side

No. 3

Future Growth Opportunities

5 ways to view the Web opportunity for the Audience Network

1. Customer Segmentation

2. New Ad Formats

3. Supply Access

4. Geographic Expansion

5. Monetisation & competitiveness

Web has a much larger Torso and Tail than App

Top 100 domains drive only 36% of opportunity (~65% in App Non-Gaming), and 57% is HOM. Sizeable opportunity with torso equaling 1/3 of the addressable inventory

Source: DV360, web impressions, April, unaddressable inventory filtered out

Top 3 publishers represent 16% of revenue opportunity

Verizon Media (formerly Oath), Microsoft and Ebay revenue potential $380M for 2023

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- Ebay – Sandwich (proprietary)
- Microsoft – Prebid Server (hosted by AppNexus)
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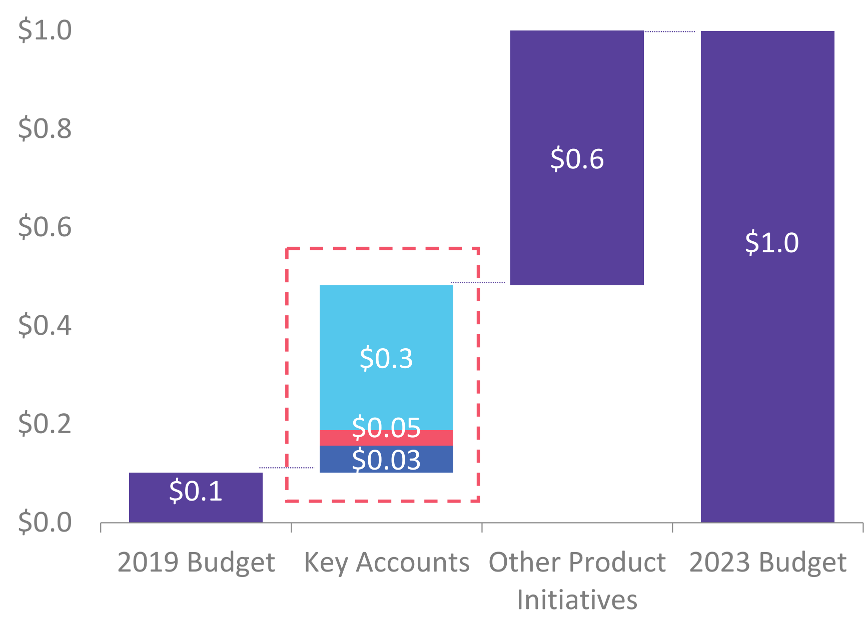
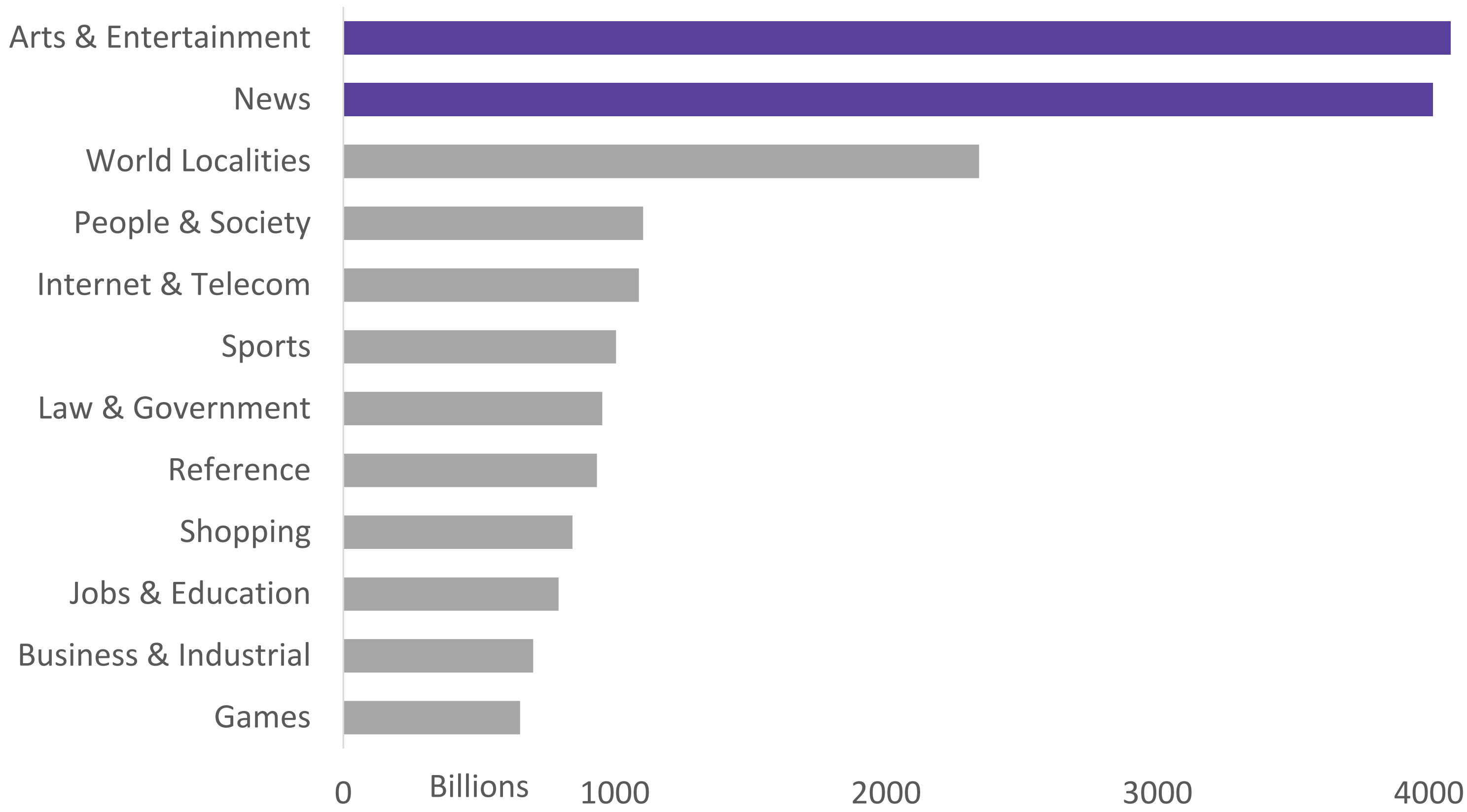
Contribution of Top 3 Pubs to 2023 Budget ($B)



Source: DV360 & SimilarWeb impressions, April 2019

Entertainment & News ~11% of publishers impressions, only

Limited concentration of supply on either Mobile Web and Desktop



Add tier (HOM, etc) by Category

Source: DV360, web impressions, April, unaddressable inventory filtered out

Integration

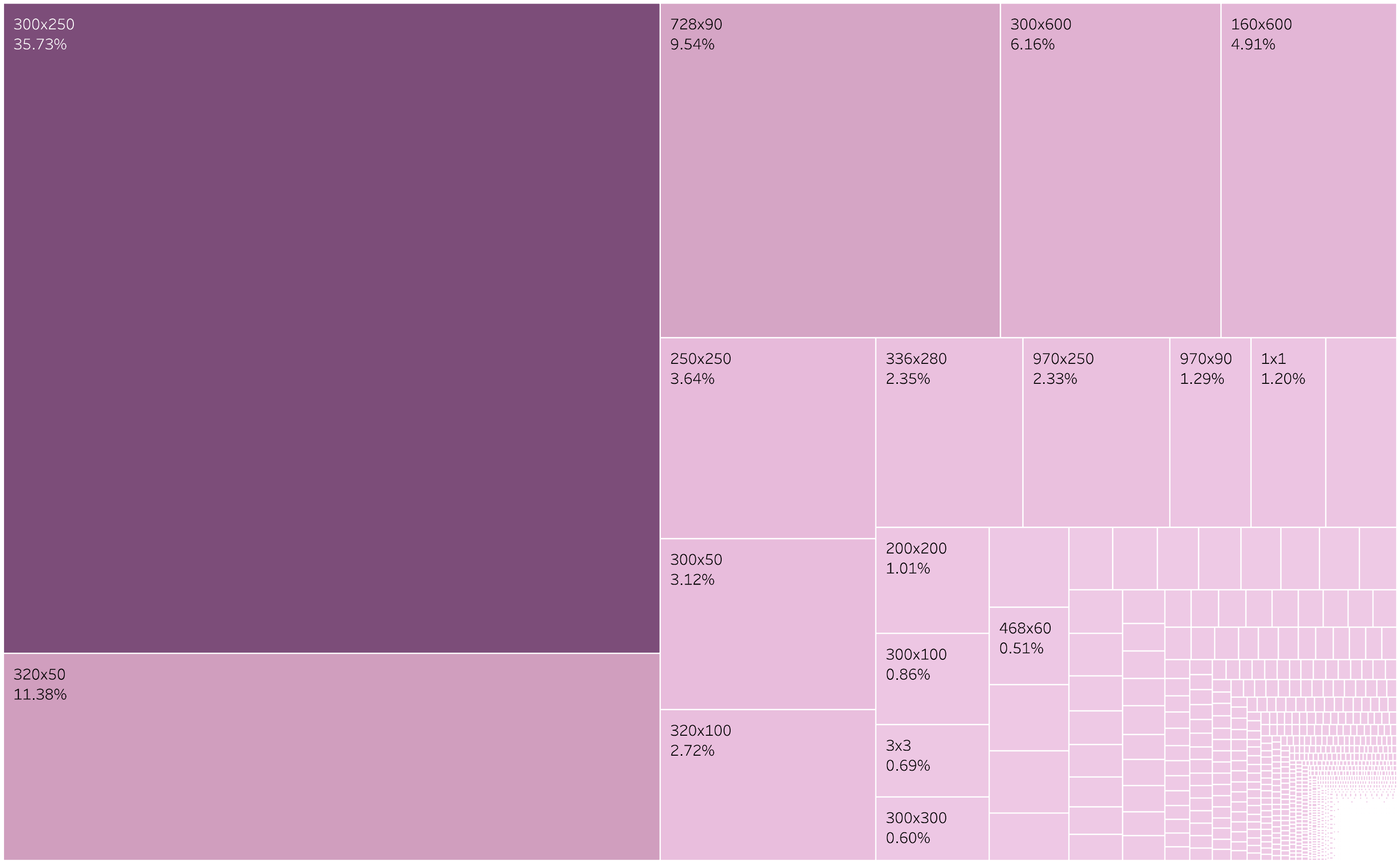
Preferred container solutions

Source: DV360, web impressions, April, unaddressable inventory filtered out

Need to add data from Matvey & Darren

Top 10 creatives sizes take up more than 80% of the market

300X250 unit alone accounts for 1/3 of the impressions

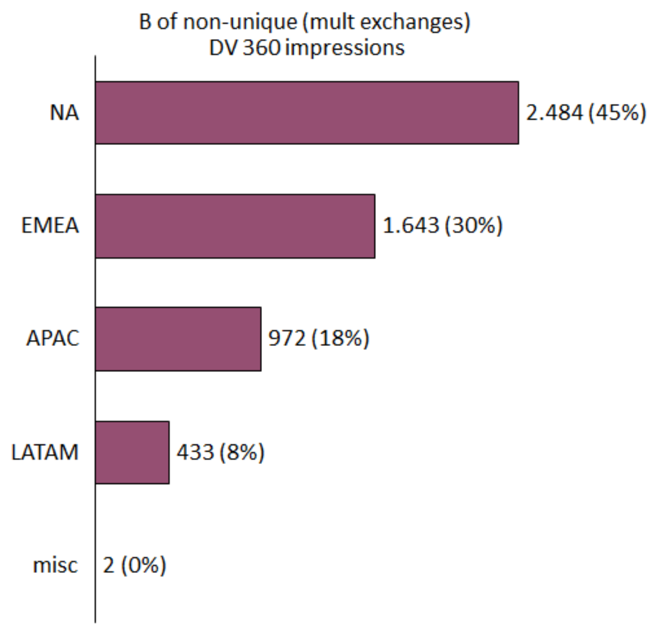


Creatives sizes: % of overall impressions

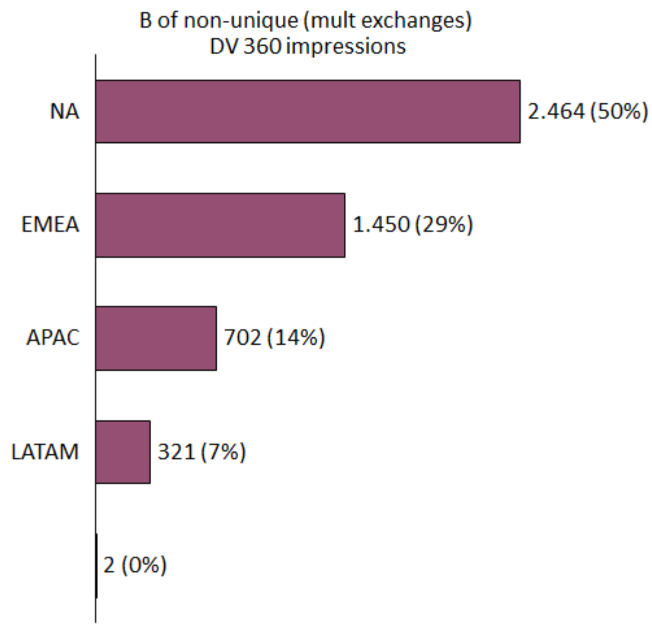
Standard IAB formats are the lions share of volume. Rich media & expandables (1x1) constitute 1.2% of supply

Both mobile and desktop are heavily driven by NA region with ˜50% impressions there

Mobile



Desktop



Standard Display Formats & Outstream are the largest supply opportunity on Mobile Web

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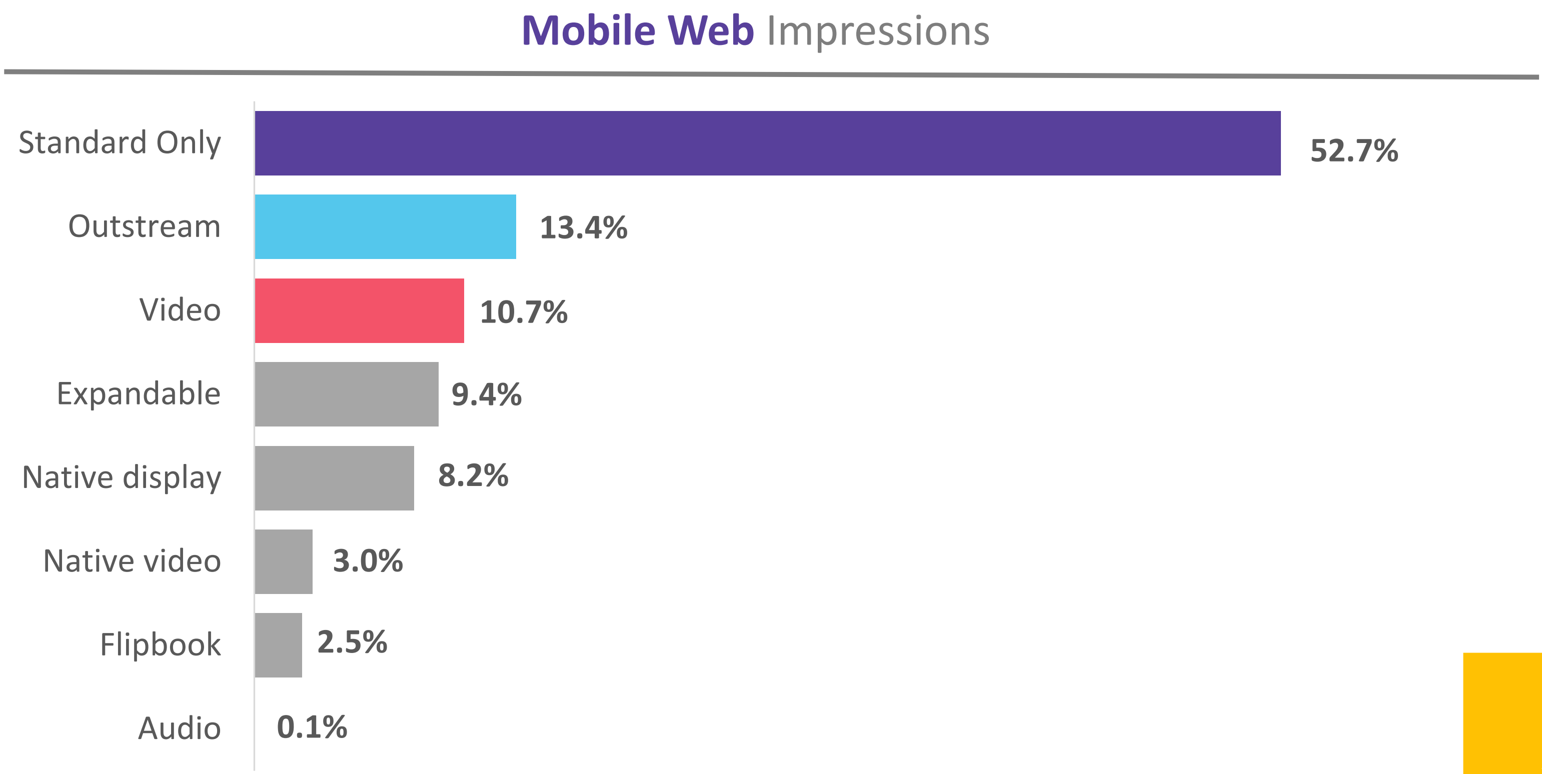
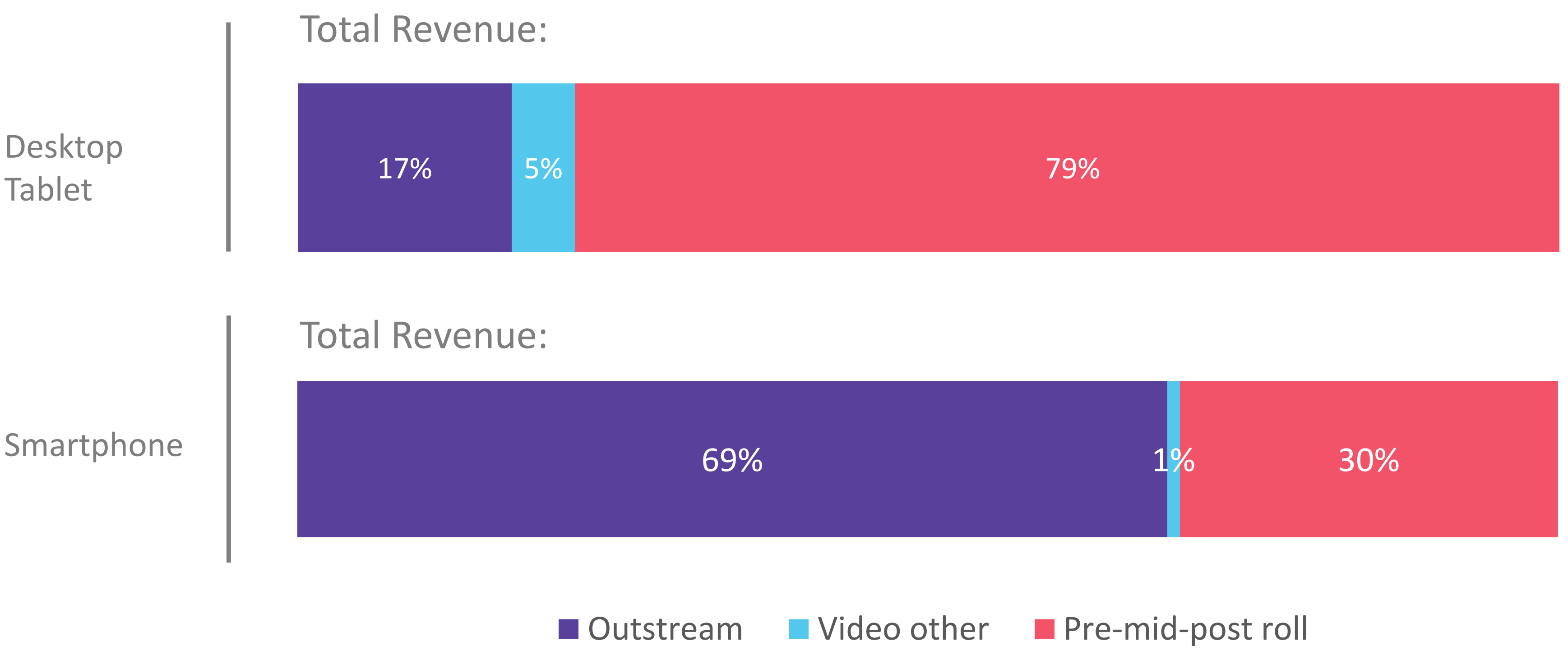


Add revenue

Outstream Over-Indexes on Smartphones

Mobile Web is the largest outstream opportunity

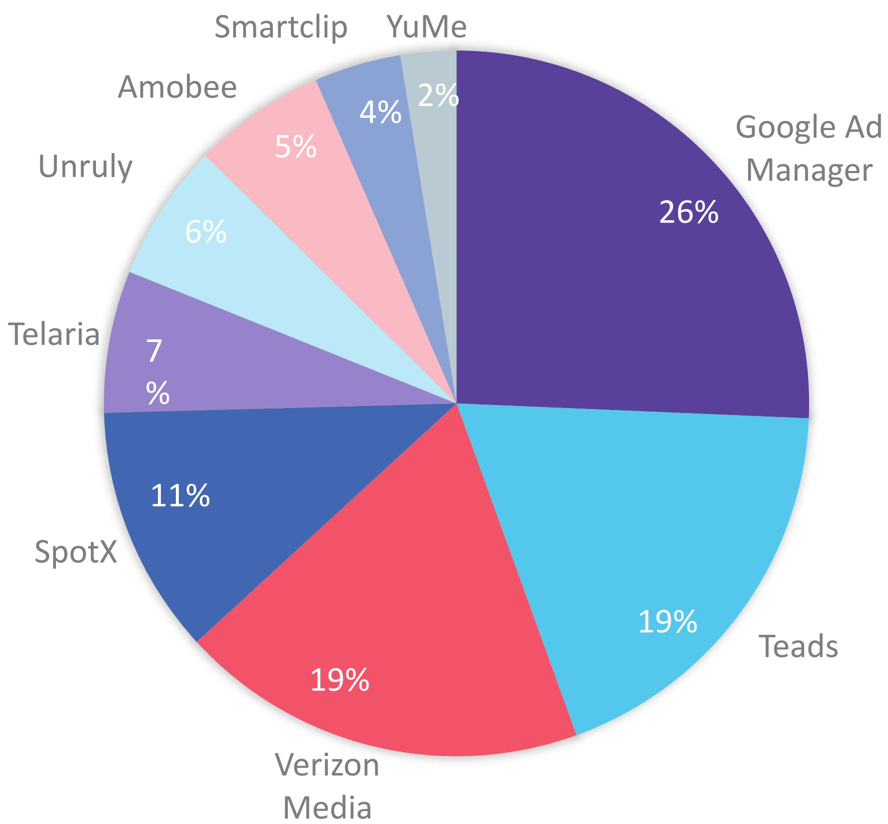


*Video other excluding IBV served from 300x250 or full width

Source: IAB/PWC Ad Spend Reporting - US routstream evenue from 2018 .

Outstream Market Remains Fragmented Despite Acquisitions

Largest opportunity to access web supply through client & server-side bidding integrations



Trend: media owners buying Outstream ad tech vendors for greater inventory control & transparency

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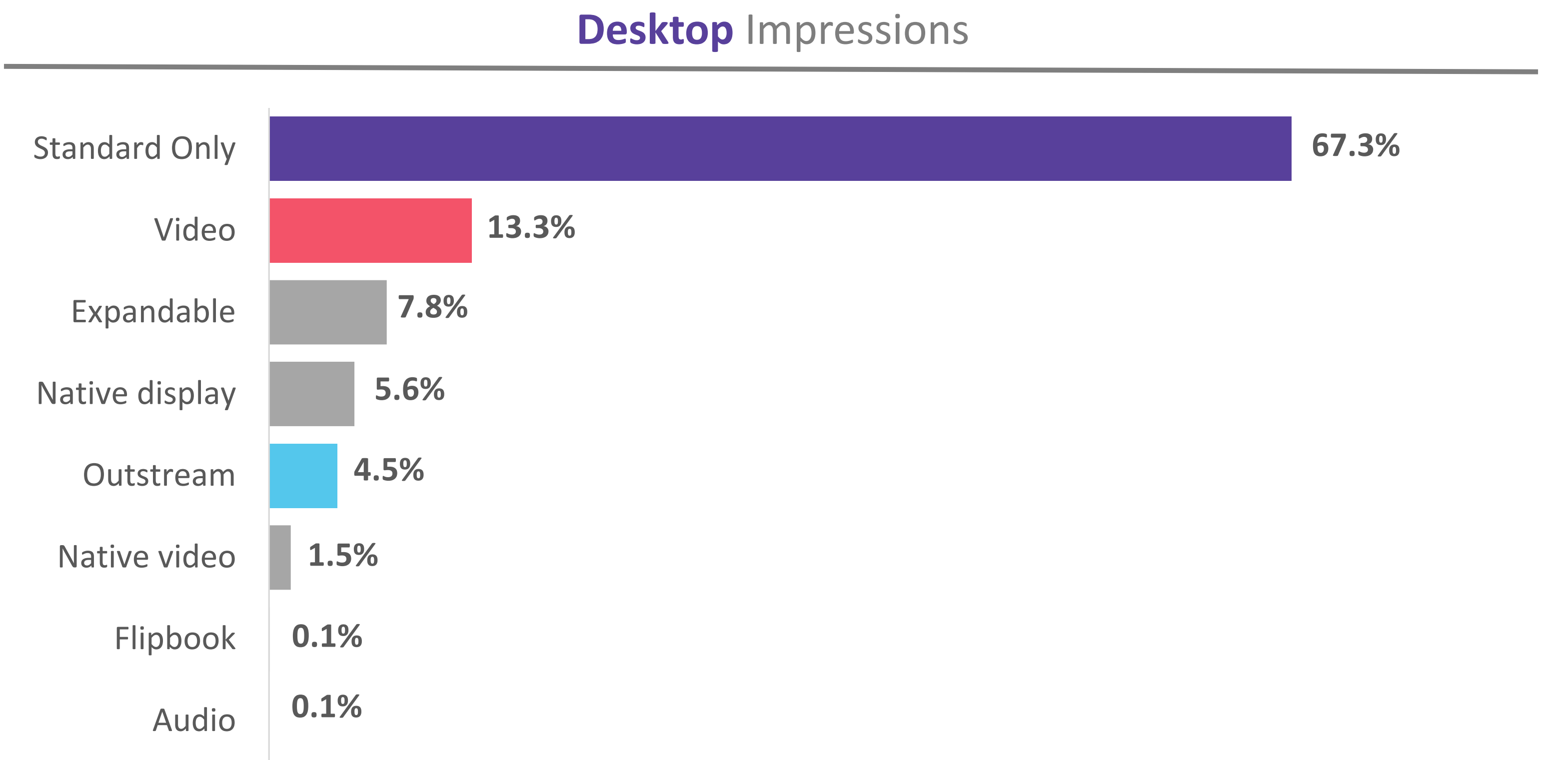
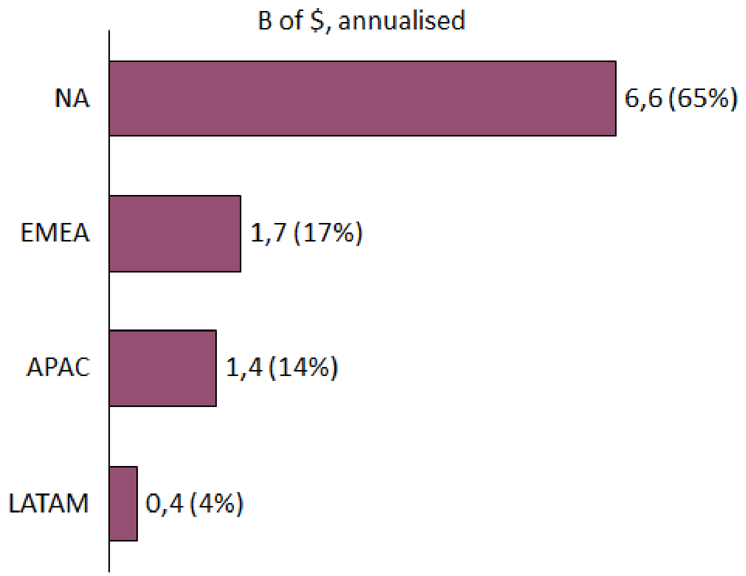
Source: Emarketer Video & Display Metrics (2018) and Comscore AdMetrix Video (Mar 2018)

Standard Display Formats and Video, specifically In-Stream and IBV, are the largest opportunity on Desktop

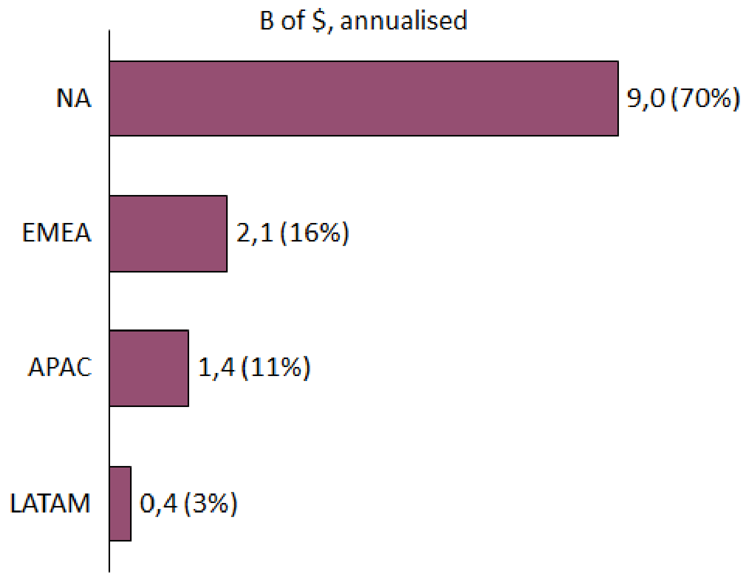


$-wise NA presents the biggest opportunity at 65-70% of the market: $6.6B for mobile and $9B for desktop

Mobile



Desktop



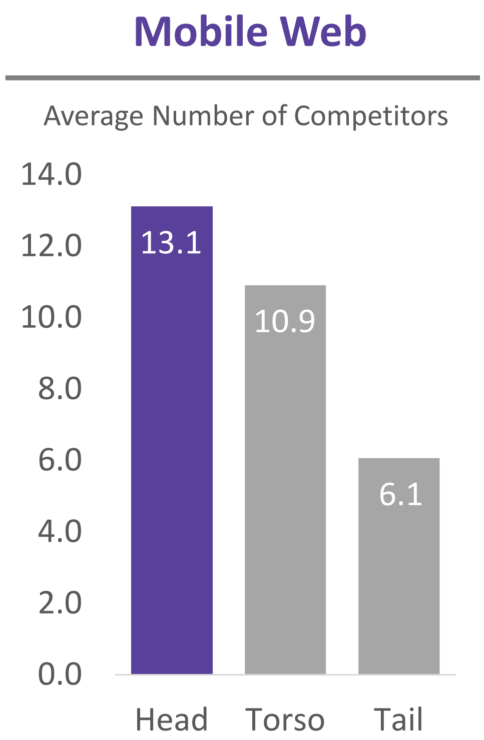
Note: for different regions, scaled FAN CPMs were used

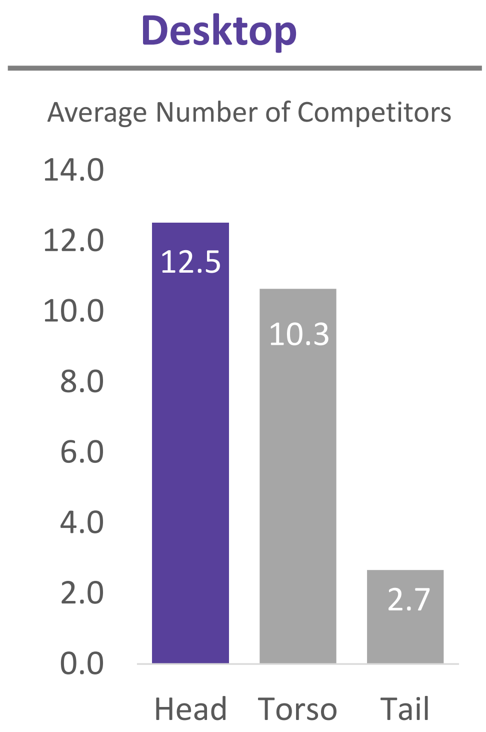
No. 4

Competitive Landscape

Dense Competition in Head & Torso with +10 exchanges integrated

+46% more demand sources competing for Mobile Web inventory than on App





Note: Data is based on DV360. Average number of competitors is the volume of programmatic exchanges accessing a publishers supply in each publisher tier. This could be either via a tag or parallel mediation

Access to Supply Is Now Ubiquitous

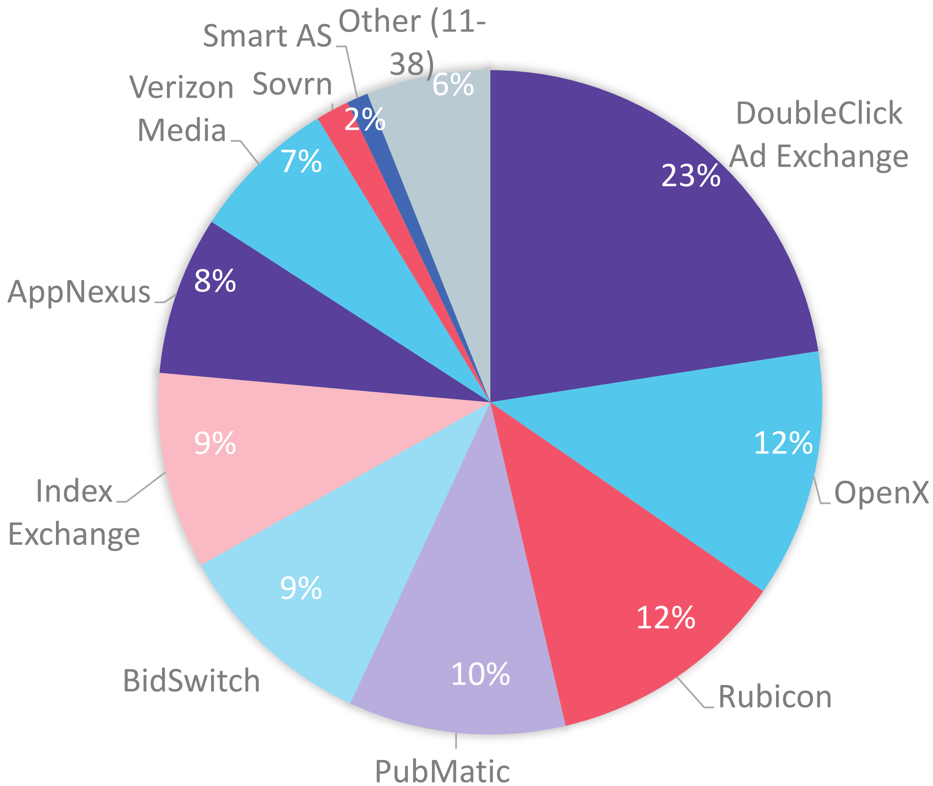
Overview of Top Web Competitors

Legacy exchanges retain strong competitive position in saturated supply marketplace

OpenX - $1.4B gross revenue
Differentiation - Launched OpenAudience; people based marketing solution partnering with LiveRamp, Adobe and Lotame DMPs to compete with Walled Garden.

Rubicon - $1.5B gross revenue
Differentiation – (1) Strongest independent PMP provide. (2) Auction mechanics, specifically Estimated Market Rate (EMR). Bid shading tool-kit designed to optimise supply path for buyer & maximise win-rate for publishers

Index – NA (estimated $1.8B)
Differentiation – Access to premium publisher supply. Proprietary client-side container developed on top of Prebid. Member of the governing body for Prebid and hosts server-side container enabling better match rates



No. 4

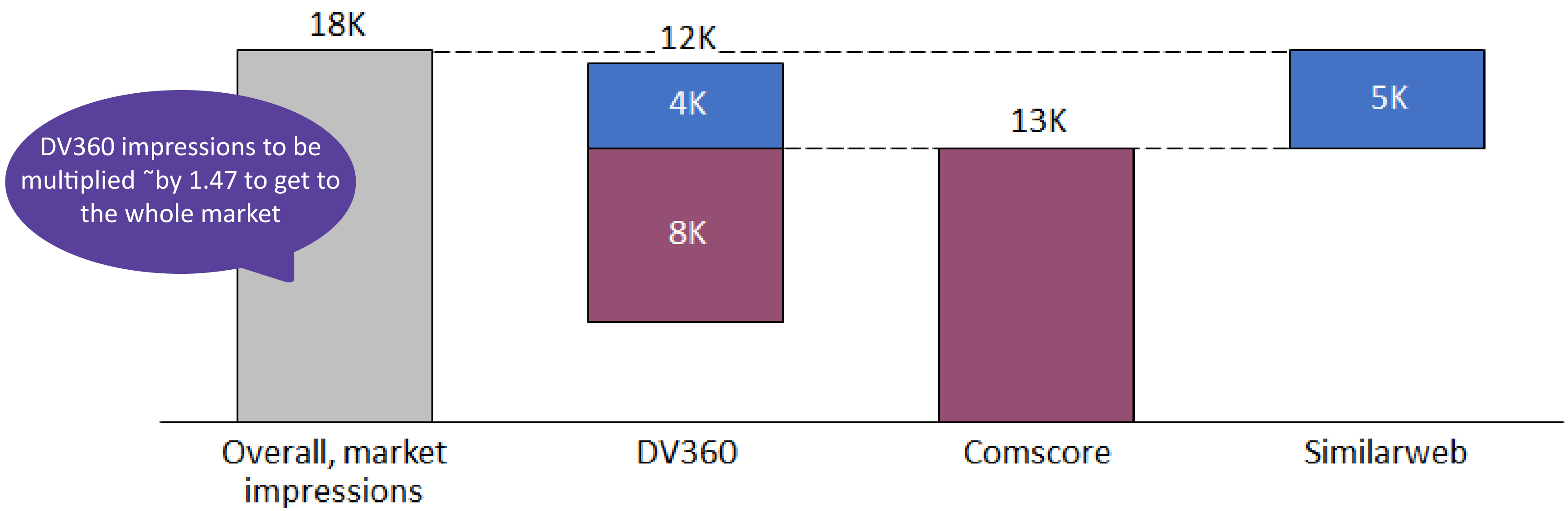
Appendixes

Tips and tricks

DV360 impressions account for ˜2/3 of the market – and should be multiplied ~by1.5 to arrive at the whole market

(schematic, doesn‘t show Comscore and Similarweb overlap – even though it‘s accounted for)

B of impressions, monthly



Data: monthly impressions, latest available month (April)
Calculation methodology: Step 1: *For comscore X DV360 overlap, IM1: Σimpressions/Σpage views;* Step 2:*For unique comscore pubs, I1: Σpage views * IM1; Step 3: M1 = I1/ ΣDV360 impressions; Step 4: Calculate same M2 for similar web*
*For any impressions figure based on DV360, F, amalgamated market figure would be F * **(1+M1+M2)***
Note: less unaddressable sites