Our summary perspectives

• We estimate the kids digital advertising market could reach c.$1.2bn by 2019, supported by strong (and structural) tailwinds, including kids media consumption trends, the intentions of brands to grow digital spend and regulatory requirements

• Upsides include (i) a faster than expected transfer of spend away from bundled TV & digital deals, and (ii) a greater than expected impact of GDPR on non-compliant* platforms

• Additionally, increasing regulatory requirements and awareness of the benefits of compliance support a shift in spend towards dedicated ‘kidtech’ players

• The fragmentation of online viewing supports a transition in spend to ‘marketplace’ models, with further upside if declines in kids TV viewing lead to a reduction in digital inventory bought directly with kids broadcasters in bundled deals

• While the outlook for kids programmatic is inherently uncertain given how nascent it is, we expect adoption to grow, albeit slower than was seen for conventional programmatic advertising. This reflects the perceptions of buyers and partners, though there is still further education needed

• There are a growing number of companies giving increasing focus to providing the technology or buying services for kids digital advertising, which will further facilitate growth in this market

*Throughout this report, we use ‘compliant’ to refer to platforms or publishers that we believe to have achieved certification through an FTC-approved COPPA Safe Harbor Program (such as kidSAFE, TRUSTe, ESRB, etc.) at the time of writing
Advertising to kids under 13 online is an increasingly regulated practice in the US and Europe

Overview of regulatory landscape for digital advertising to children U13 in the US and Europe

<table>
<thead>
<tr>
<th>What</th>
<th>Where</th>
<th>How</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ads must not be unfair or deceptive (EU and US) – i.e. no promotions, endorsements, product placements, branded games without being labelled as an advert</td>
<td>• Regulations apply to all publishers where the content is mostly aimed at children (i.e. children are over 25% of audience)</td>
<td>• COPPA – US, GDPR – EU (from 2018): No collection or use of PII incl. cookies to target ads without parental consent and other conditions</td>
</tr>
<tr>
<td>• Legal ban on ads for unhealthy or inappropriate products in the UK and EU to children. Additionally, many brands have pledged not to advertise unhealthy products to U13s globally</td>
<td></td>
<td>• No online behavioural advertising targeting U13s (EU advertising standard)</td>
</tr>
</tbody>
</table>

Key requirements

Enforcement

- Federal Trade Commission
- ASA / CAP
- Multiple regulators

Penalties

- Youtube Kids Faces Further FTC Complaints Related To Junk Food Ads Targeting Young Children
- Disney sues for allegedly spying on children through 42 gaming apps
- Viacom Targeted by Mom Suing Disney Over Kids Apps
- YouTubers ads for Oreo banned for not making clear purpose of videos

Penalties

- $40k per individual user violation - COPPA
- €10m or 2% of revenue – GDPR (whichever higher) 2

Note: 1. PII: Personally Identifiable Information 2. Maximum GDPR penalties are €20m or 4% of revenue, but offences relating to children’s privacy appear to be subject to this lower threshold

Source: FTC, GDPR, Press Searches, PwC interviews
The market is characterised by major kids brands aiming to reach kids in the places where they spend time online

Selected examples of brands and publishers in U13 digital advertising ecosystem

<table>
<thead>
<tr>
<th>Brands</th>
<th>Agencies</th>
<th>Tech platforms</th>
<th>Publishers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toys</td>
<td></td>
<td></td>
<td>Content aggregators</td>
</tr>
<tr>
<td>E.g. Hasbro, LEGO, Mattel</td>
<td></td>
<td></td>
<td>E.g. YouTube, YouTube Kids</td>
</tr>
<tr>
<td>Film</td>
<td></td>
<td></td>
<td>Broadcasters</td>
</tr>
<tr>
<td>E.g. Disney, Warner Bros, Sony</td>
<td></td>
<td></td>
<td>E.g. Disney, Nick, Turner</td>
</tr>
<tr>
<td>Food / Cereals</td>
<td></td>
<td></td>
<td>Games</td>
</tr>
<tr>
<td>E.g. Kellogg's, General Mills</td>
<td></td>
<td></td>
<td>E.g. Outfit7, Rovio, Roblox, Miniclip</td>
</tr>
<tr>
<td>Gaming</td>
<td></td>
<td></td>
<td>Online worlds</td>
</tr>
<tr>
<td>E.g. Activision, Nintendo</td>
<td></td>
<td></td>
<td>E.g. Minecraft, Bin Weevils</td>
</tr>
<tr>
<td>Publishing</td>
<td></td>
<td></td>
<td>Social</td>
</tr>
<tr>
<td>E.g. Penguin Random House, DK</td>
<td></td>
<td></td>
<td>E.g. PopJam, Musical.ly</td>
</tr>
</tbody>
</table>
Declining kids TV viewership is placing pressure on TV ad budgets...

Themes from PwC interviews with brands, agencies and tech platforms:

- **Falling TV ratings** constraining the available inventory
- Marketing strategies that are becoming less reliant on TV, and **more focused on digital**
- Prospect of **increasing prices for TV** as impressions fall, creating comparatively better value in digital
- Acknowledgement that **TV ad revenue has been resilient despite viewership declines**, though this may change going forward
...combined with a greater willingness of brands and agencies to invest in digital

Themes from PwC interviews with brands, agencies and tech platforms:

A significant transition to digital is already underway

- Digital has grown as a share of ad budgets from almost zero to a substantial minority in most cases
- Some brands are now spending c.50% of their budgets on digital
- The UK market is more digitally mature than US spend
- The toys market, dominated by a small number of large brands, has been one of the strongest early adopters of digital

This is partly driven by new opportunities that digital provides

- Digital allows brands to use more engaging content – videos and games, for instance – to connect with kids
- It allows the creation of communities through the use of social media and influencer marketing
- It can provide an online destination / presence for brands

There are some short-term obstacles that may clear going forward

- There is still more to be done to grow awareness and educate brands on the potential
- There can be constraints on the availability of premium inventory
- Some brands are still exhibiting caution in relation to digital, regarding brand safety and compliance

Source: PwC Interviews
Digital advertising in the kids space is increasingly being driven by the need for compliance...

Regulators have been increasing the pressure on brands, agencies and publishers to be more compliant

The introduction of GDPR will bring new requirements to Europe similar to the US COPPA regulation

New York Attorney General

Operation Child Tracker – Since 2014, the AG of New York has been investigating and prosecuting violations of COPPA, successfully challenging big brands like Mattel, Viacom and Hasbro

- There appears to be mounting pressure and more resources focused on enforcing COPPA in recent years
- Regulators have successfully prosecuted organisations across the whole value chain
- Compliance is now a key requirement for kids brands and publishers, driving demand for compliant advertising
- Class-action lawsuits have recently been filed against Disney, Viacom and Kiloo for alleged COPPA infractions

- Companies will not be able to collect and process children’s PII without verified parental consent
- The size of penalties will force companies to robustly comply or avoid collecting and using PII altogether
- This will likely drive growth in compliant advertising and certification (across all parts of the value chain)

Specific requirements for children’s PII:
- Parental consent required for collecting and using data – this is a new requirement for EU businesses
- Definition of a child could be set at under 16s in some countries (still to be determined)
- Applies to people located within EU, so foreign businesses with EU users are also impacted
- Applies across the entire digital advertising value chain
- Significant fines of higher of 2% of revenue or €10m – however enforcement is yet to be clarified


Kids Digital Advertising Report 2017
PwC
...and a shift from publisher-centric to marketplace-centric advertising

We estimate that YouTube accounts for around 30% of kids’ online time...

Weekly time spent watching YouTube, UK 3-16 year olds, 2016²

% of respondents

<table>
<thead>
<tr>
<th></th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>13%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;3 hours</td>
<td>32%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-4 hours</td>
<td></td>
<td>23%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-10 hours</td>
<td></td>
<td></td>
<td>15%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-20 hours</td>
<td></td>
<td></td>
<td></td>
<td>8%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20+ hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t know</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Average weekly time spent on YouTube: **c.4.5 hours**

This would represent **c.30%** of the c.15 hours kids spend with online media each week¹

...though beyond YouTube, online time is fragmented, with some traditional sites losing share

Total website traffic to selected kids broadcasters and games platforms, Nov 15 - Apr 17

Note: 1. Based on Ofcom study; 2. Based on eMarketer (Sep 2016)
Source: Ofcom (‘Children and parents: media use and attitudes report’, Nov 2016), SimilarWeb

This reflects a need for a marketplace-centric approach rather than a publisher-centric approach, allowing brands to find their audience across a disparate set of inventory
**Platforms/networks that can aggregate compliant inventory are likely to be well placed**

Kids digital advertising market by channel, 2016-2019

<table>
<thead>
<tr>
<th>Platforms/networks</th>
<th>CAGR 16-19</th>
<th>Compliant?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>25%</td>
<td>Varies</td>
</tr>
<tr>
<td>VOD</td>
<td>32%</td>
<td>Varies</td>
</tr>
<tr>
<td>Other (non-compliant)</td>
<td>9%</td>
<td>X</td>
</tr>
<tr>
<td>Other (compliant)</td>
<td>44%</td>
<td>✓</td>
</tr>
<tr>
<td>Kids broadcasters (non-compliant) - digital only</td>
<td>3%</td>
<td>X</td>
</tr>
<tr>
<td>Kids broadcasters (compliant) - digital only</td>
<td>35%</td>
<td>✓</td>
</tr>
<tr>
<td>Kids broadcasters (non-compliant) - TV bundles</td>
<td>-18%</td>
<td>X</td>
</tr>
<tr>
<td>Kids broadcasters (compliant) - TV bundles</td>
<td>7%</td>
<td>✓</td>
</tr>
<tr>
<td>YouTube</td>
<td>31%</td>
<td>X</td>
</tr>
<tr>
<td>Search</td>
<td>23%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source: PwC Analysis, PwC Interviews

In the future, many of these inventory sources are likely to be aggregated by platforms.

Advertising packages sold as digital-only

Advertising packages sold as part of a bundle with TV ads

Significant opportunity for marketplace models which can aggregate online inventory in a compliant manner.
There are a number of favourable (and structural) tailwinds which we expect to drive strong rates of growth in the digital kids ad market.

### Drivers of growth / attractiveness for advertisers

1. **Total U13 kids’ ad spend**
   - Industry growth c.5% p.a.
   - Increasing global U13 population c.1% p.a.
   - Audience with rising “pester” power and spending power
   - Strong competition among kids brands

2. **Digital U13 kids’ ad spend**
   - Rapid consumption shift from TV to digital
   - More efficient /cost effective marketing vs. TV
   - Increasingly targeted, innovative and engaging advertising

3. **Compliant sites ad spend**
   - Growing regulatory pressures/ penalties
   - Increasing awareness of benefits of compliance
   - Increasing supply of compliant inventory coming to market

4. **Compliant programmatic ad spend**
   - High (and rapidly increasing) programmatic penetration within the mainstream digital ad market

### Potential threats to growth

- Rate of TV decline may offset digital growth
- Political uncertainty
- Public pressure surrounding the moral implications of advertising to minors

### Growth Outlook p.a.

<table>
<thead>
<tr>
<th>% of U13 kids’ market (2016)</th>
<th>c.1%</th>
<th>c.25%</th>
<th>c.30%</th>
<th>100+%*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth Outlook p.a.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*From a small base*
We estimate that spend on kids digital advertising could reach $1.2bn by 2019, representing 28% of all advertising to kids.
Programmatic advertising to kids is a new development that should also support growth in spend

We estimate that 10-20% of adspend on compliant inventory ($50-100m) may be programmatic by 2019...

...supported by the views of media buyers and partners

Themes from PwC interviews with brands, agencies and tech platforms:

- Early indications have been positive, with a strong uptake of programmatic buying in some brands
- There is potential to reach kids in a more sophisticated and tailored fashion
- It is ultimately seen as beneficial for ROI / conversion to sales
- The obstacles at present are the relatively low awareness of kids-specific programmatic products, and the more limited attribution capabilities compared to ordinary programmatic

Source: PwC Analysis, PwC Interviews

Kids Digital Advertising Report 2017
PwC
There are also a number of social media platforms emerging aiming to offer compliant kid-safe environments

<table>
<thead>
<tr>
<th>Social media platform</th>
<th>Description</th>
<th>Compliant?</th>
<th>U13s policy</th>
<th>Ads?</th>
<th>Proposition</th>
<th>Photo / Video</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Creative</td>
<td>Messages</td>
</tr>
<tr>
<td>PopJam</td>
<td>Kids-focused creative community app</td>
<td>✓</td>
<td>Core audience</td>
<td>✓✓</td>
<td>x ✓ ✓ ✓</td>
<td>✓</td>
</tr>
<tr>
<td>KidMix</td>
<td>Kids social network (feed, messaging, channels)</td>
<td>✓</td>
<td>Requires parental consent</td>
<td>✓✓</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Marimba</td>
<td>Protected messaging app</td>
<td>✓</td>
<td>Requires parental consent</td>
<td>✓✓</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Padlet</td>
<td>Creative collaboration app</td>
<td>✓</td>
<td>Allowed, but not directed at U13s</td>
<td>✓✓</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Houseparty</td>
<td>Group video chat app</td>
<td>✓</td>
<td>Excluded in ToS</td>
<td>✓✓</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Musical.ly</td>
<td>Lip-sync video-sharing app</td>
<td>✓</td>
<td>Excluded in ToS</td>
<td>✓✓</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Mainstream social media (e.g. Facebook, Snapchat)</td>
<td>Social feed, photo &amp; video-sharing</td>
<td>✓</td>
<td>Excluded in ToS</td>
<td>✓✓</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓</td>
</tr>
</tbody>
</table>

Source: Company Websites, kidSAFE, Common Sense Media, Press, Protect Young Eyes

Kids Digital Advertising Report 2017
PwC
New ‘kidtech’ companies have emerged in a market with relatively high barriers to entry for mainstream players

Challenges for mainstream players to operate compliantly in the kids digital ad market

Traditional media ad agencies
- Expertise required to ensure compliance with COPPA / GDPR
- Lack of in-house kidtech expertise
- Kids a relatively small part of overall business

Mainstream adtech companies
- Expertise required to ensure compliance with COPPA / GDPR
- Data/profile-driven technology incompatible with technical compliance requirements of U13 space
- Kids a relatively small part of overall business
- Trust issues to overcome
The emerging kidtech landscape

Example providers by product offering area

<table>
<thead>
<tr>
<th>Kids Brands</th>
<th>Media Agencies</th>
<th>Specialist Agency Services</th>
<th>Ad Marketplace/Networks***</th>
<th>Ad Serving****</th>
<th>Publisher/Brand Tools</th>
<th>Publishers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Beacon Media Generation Media</td>
<td>Direct deals with publishers</td>
<td></td>
<td>SuperAwesome Freewheel**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Programmatic buys</td>
<td></td>
<td>SuperAwesome</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>YouTube*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yoki</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Playwire Media</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SuperAwesome</td>
<td></td>
</tr>
</tbody>
</table>

Notes: *YouTube is not a COPPA-compliant platform; **Freewheel (owned by NBC Universal) is used for ad-delivery for certain kids VOD platforms; ***Network buys exclude non-compliant, non-kids networks such as Venatus Media; ****Ad serving excludes non-compliant, non-kids solutions such as DFP
Key contacts

Mark Maitland
Media Strategy Partner, PwC
mark.o.maitland@pwc.com

Dan Bunyan
Media Strategy Director, PwC
daniel.j.bunyan@pwc.com

Caterina Giugovaz
PR & Content Marketing Manager, SuperAwesome
caterina.giugovaz@superawesome.tv

This publication has been prepared for general guidance on matters of interest only, and does not constitute professional advice. You should not act upon the information contained in this publication without obtaining specific professional advice. No representation or warranty (express or implied) is given as to the accuracy or completeness of the information contained in this publication, and, to the extent permitted by law, PricewaterhouseCoopers LLP, its members, employees and agents do not accept or assume any liability, responsibility or duty of care for any consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this publication or for any decision based on it.

© 2017 PricewaterhouseCoopers LLP. All rights reserved. In this document, “PwC” refers to PricewaterhouseCoopers LLP which is a member firm of PricewaterhouseCoopers International Limited, each member firm of which is a separate legal entity.