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BBC Trust

Mobile apps: market overview and strategic implications for the BBC

2nd June 2010

Executive summary

- Mediatique is working with the BBC Trust to better understand the market for mobile apps, and to consider the potential impact of the BBC's entry into this relatively nascent market

- The market for Mobile Apps is immature, chaotic and competitive, and there is a paucity of concrete data on the basis of which to form definitive conclusions. In this report, we have has reviewed the available data, analysed current trends and dynamics, identified the source of future dynamics and proposed preliminary conclusions on the plans by the BBC to launch mobile apps for news, sport and the iPlayer

- Our key initial observation is that the apps market is a sub-set of the market for the delivery of mobile content, which includes the mobile browsing sector and apps stores (including both integrated "portals" such as the iPhone-iTunes model, Blackberry World, Nokia Ovi and third party "retail" stores)'; the fastest growing segment of mobile content is the iPhone platform but there continues to be major competition from Blackberry-RIM and Symbian (Nokia/Sony Ericsson)

- While the apps store segment evinces some characteristics that distinguish it from the broader mobile browsing market in the short term, it is likely that the dynamics overall will converge over time, as browsers are improved and as customer relationships are reconfigured

- In particular, while the apps store market is currently distinguished by ease of use/access, user-friendly billing and clearer navigation around available services, which are aggregated and compellingly offered to the end consumer, the mobile market already shares trends with the more mature and large online content and services market, particularly in relation to news and sports. In both distribution models, customers overwhelmingly prefer "free" services, and the ability to source web content via web browsers is already able to substitute for paid-for apps in the delivery of generic news and sports

- We conclude that the availability of content for free online, which is increasingly accessible via web browsers affording re-purposed content via mobile devices, will make it harder over time for content suppliers to charge for apps that provide access to content available online for free; the advantages of apps (bespoke mobile-purposed content, findability, novelty) will therefore reduce over time

- The key future drivers of change in the sector include: network speeds (still patchy), efforts by mobile operators to "re-capture" billing relationships for customers seeking enhanced mobile content and services, associated "bundling" of services by operators, consolidation across the value chain (operators, operating systems, apps aggregators), consumer preferences as mobile content trends increasingly mass market and the potential emergence of mobile as a platform for a range of home delivered as well as on-the-move content and services

- In conclusion, the BBC would be entering a market that is already trending toward free apps (in news, sport and long-form video content) and is likely to trend further in that direction over time, irrespective of the BBC's entry; the most likely countervailing trend tending to alter this dynamic is the effort by content suppliers to introduce comprehensive charging models for, e.g., all online news content – this would allow pricing models to obtain in mobile delivery as well

- There may be issues surrounding the sequence and timing of the BBC's launch on different operating systems: there may be the effect of "picking winners" if the BBC provides de facto exclusivity, even if time-limited, to a single operating system (given that the BBC's content is already hugely popular in the online space and is heavily promotable via the BBC's other "channels to market" – TV, radio in particular)

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1. Introduction

Mediatique is working with the BBC Trust to review the market for mobile apps, in the context of the BBC's plans to enter the market

- The use of mobile phones as a platform for accessing content and services continues to grow, driven by increasing penetration of internet-connected phones and consumer demand for on-the-move access

- Historically, such access was enabled by web browsers on mobiles; however, more recently these have sat alongside bespoke mobile applications ("apps"), which offer a more seamless made-for-mobile experience

- As is generally the case for content accessible through the internet, there are few barriers to entry for those seeking to create and launch an app – and the market has boomed as a result, with many hundreds of thousands of apps available across a range of devices and operating systems

- The BBC has to date largely relied on web browsers as a means of reaching mobile viewers, although many of its web pages are repurposed for mobile consumption and "bookmarks" have been created (for example for the iPlayer and BBC News) that can be downloaded via its web page to smartphone devices or sent in response to a text from users

- The BBC is now proposing to launch a number of apps within its core genres – news, sport and catch-up TV – to be available via apps stores such as that supplying the iPhone; these plans are subject to a review by the BBC Trust

- Mediatique is working with the BBC Trust to better understand the market context of these proposals, and to consider the potential impact of the BBC's policy on this relatively nascent market

- The BBC Trust asked us to analyse the key dynamics of the apps market and the role and impact of the BBC in this market. The key areas of our analysis are set out opposite

Scope of our analysis

Area of analysis | **Key question areas**

Market overview
- What are the main dynamics of the apps market, and who are the main players?
- What are the drivers of the apps market?
- What are the key business models – now and over time?
- How will the market evolve?

The BBC's role in the apps market
- What apps are the BBC proposing to launch?
- How does the BBC's cohort view these plans?
- What is the potential impact on the market of the BBC's entry?

This report does not constitute a formal market impact assessment, although we do consider potential effects of the BBC on the market and its cohort

2. Market overview
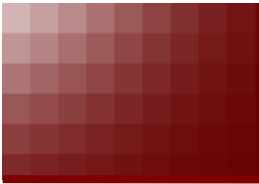
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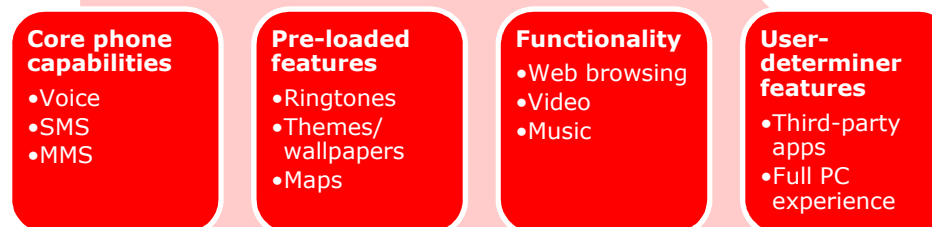
The launch of mobile apps reflects moves by networks and device manufacturers to incorporate new features into their user propositions; although the market is nascent

- Technological developments have enabled near-universal access to the internet over mobile phones since the first commercial launch of mobile-specific web browsers by DoCoMo in 1999

- The early days of mobile internet access were characterised by poor coverage and slow speeds, coupled with a scarcity of enabled handsets (which were typically expensive) and onerous network and data charges for internet usage. The pace of change has been rapid since then, however – driven by network upgrades, investment in handset technology and increasing consumer demand for on-the-move internet access

- The mobile sector is highly competitive across the value chain, and competition among device manufacturers, operating systems and networks has ensured that the consumer proposition for mobile users continues to evolve, incorporating additional features and functionality

- Standard featurephones and the new generation of smartphones all allow users to access the internet via a web browser, even if this initially proved to be cumbersome for mobile users, as screen size and navigation meant the mobile internet experience did not match the experience of consumers online. Content owners thus sought to repurpose their web pages for mobile phones and, more recently, launched bespoke mobile applications which provide a richer and more customised way to access online content via mobile (in particular for video)

- Historically, handsets were offered to users with built-in features, with no ability to add or remove features. Device manufacturers have subsequently launched more sophisticated smartphones, with proprietary operating systems allowing uses to add/remove third-party applications themselves and customise their devices according to their own preferences

- These advances created a new market for third-party apps, effectively bypassing the walled garden approach imposed by the old handsets. The launch of app "stores" revolutionised the market by aggregating apps into a single access hub, where consumers could browse and select from a library of apps. The first app store was launched by Apple in 2008, followed closely by a number of competing stores

Evolution of mobile functionality

Source: Mediatique

Core phone capabilities
- Voice
- SMS
- MMS

Pre-loaded features
- Ringtones
- Themes/ wallpapers
- Maps

Functionality
- Web browsing
- Video
- Music

User-determiner features
- Third-party apps
- Full PC experience

- Total mobile penetration in the UK stands at close to **100%**
- More than **50%** of mobile users regularly access the internet via their mobile
- …with **20%** of users having a smartphone

- There are a range of devices, including e-readers and Apple's iPad, that share many of the characteristics of smartphones, but which are outside the scope of our analysis

- We note, however, that the iPad in particular will have a relationship to the apps market, as all apps developed for the new device will also be inter-operable with the iPhone. We refer to these, where appropriate, particularly as they may have implications for the BBC's mobile distribution strategy in future and recommend further consideration of the issues in any subsequent analyses undertaken by the Trust

Mobile apps allow users to select and download third-party software, thereby customising their devices to their personal tastes and needs

- Mobile apps refer to any third-party software programme available to download on a mobile device. Crucially, they allow users to customise their phone to a specific set of needs, introducing shortcuts to users' favoured communication, entertainment and information portals

- Whilst apps will typically sit alongside mobile web browsers on an enabled handset, they represent an effective shortcut to online content, by feeding information directly to the app without having to navigate the web. These apps are customised mobile programmes, and therefore provide a bespoke and richer mobile experience, specifically tailored to the operating system and functionality of an end-user's device. This makes accessing apps typically faster than accessing content via web browsing, although there is no *de facto* technological advantage to apps, which are subject to the exact same network restraints as web content

- Mobile apps are available across a range of categories, from entertainment, gaming and news to communication and social networking. Notably, certain apps will stream live information (on share prices, sports results or breaking news) for those wanting up-to-the-minute information on the move, making them particularly suitable for mobile consumption. In line with Web 2.0's introduction of more video content, mobile content is increasing video-rich

- It is worth noting that while there are apps available uniquely for mobile phones, most content and services are in fact re-purposed from online versions, and indeed users are able to access similar content (if not necessarily optimised for mobile use) via mobile browsers connecting directly to the internet

- Apps are generally aggregated and available through a central app store, from which users can search by category or revenue type. Apps can typically be downloaded directly on the phone, or downloaded to a computer and transferred to the phone. Once downloaded, these apps sit as icons alongside the device's central features, allowing users to customise the prominence of certain services

- There are a range of payment methods and models for apps, depending on the device and operating system; we explore these elements of the market overleaf and in subsequent pages of this report

The user experience of mobile apps

Apps are listed within categories on the central app store

Users select and download apps from these categories – either free-to-download or paid-for (and charged via associated or third-party billing system)
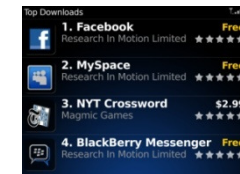
Once downloaded, these reside on the device – either as icons alongside standard features (e.g., iPhone) or within an apps folder (e.g., Blackberry)
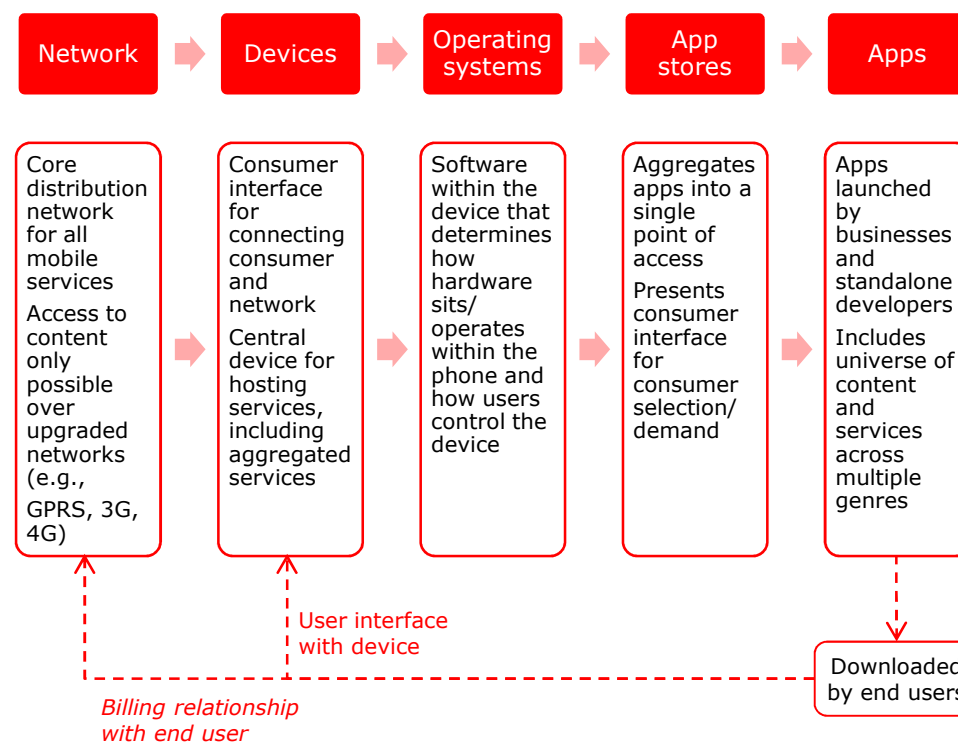

Source: Screenshots taken from Apple's App Store (top), Blackberry's App World (middle) and the iPhone (bottom)

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The market is already very crowded, with key players across the value chain – all seeking to forge closer links with the end user

- Consumers could be forgiven for thinking that the market for apps began and ended with Apple. However, for all the media surrounding Apple's App Store, it remains only one of a multiplying number of such stores, all within a crowded and inter-connected value chain

- Consumers must subscribe to a network, choose a suitable data-rich tariff and select an enabled handset before they are able to access apps. Availability of apps and app stores varies by device, with certain networks having exclusive access to particular handsets. As a result, the dynamics of consumer decision-making are no longer straightforward, particularly as consumer demand for additional functionality continues to increase

- An overview of the value chain is set out opposite, and the following pages set out in further detail the key players and dynamics within each link

- We highlight a few general market observations here:

    – The value chain's components are relatively distinct, but many players straddle more than one link. Most devices use their own proprietary operating system for example, and increasingly offer their own pre-loaded app store on their devices – hence Apple functions across devices, operating systems and app stores. The networks themselves are increasingly offering their own app stores

    – The numerous operating systems and app stores each require apps to comply with their proprietary technology; this ensures that not all apps are available on every app store, and those seeking universal reach must develop different versions for each platform; this has implications for the costs of launching apps, which we explore subsequently

    – The end-user has relationships with more than one player – including the network they subscribe to (or pay), the device they use, any associated or independent app store they search and any apps supplier whose product/service they use or pay for
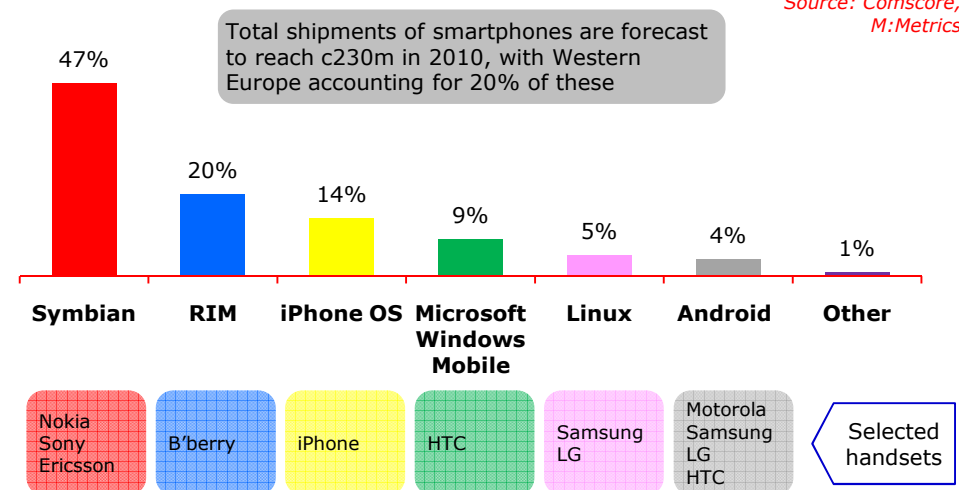
The value chain for mobile apps

Source: Mediatique

Network	Devices	Operating systems	App stores	Apps
Core distribution network for all mobile services Access to content only possible over upgraded networks (e.g., GPRS, 3G, 4G)	Consumer interface for connecting consumer and network Central device for hosting services, including aggregated services	Software within the device that determines how hardware sits/ operates within the phone and how users control the device	Aggregates apps into a single point of access Presents consumer interface for consumer selection/ demand	Apps launched by businesses and standalone developers Includes universe of content and services across multiple genres

User interface with device

Billing relationship with end user
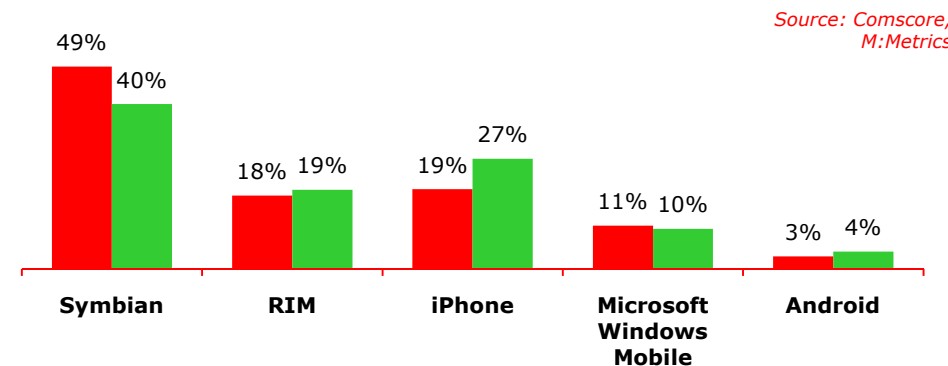
Downloaded by end users

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There are a number of devices enabling access to apps, each with their own look-and-feel, navigation and underlying operating system

- Mobile users are able to access the internet through an ever-expanding range of devices offered by all the main device manufacturers

- The current generation of featurephones enable users to browse the internet and to access certain web-based apps, but the launch of the smartphone revolutionised the market for apps by increasing the power and capability of the handset

- There is no industry definition of a smartphone, and any such definition is likely to be a relative term; in general terms, however, they typically have a central operating system that can upload sophisticated multi-media apps onto the device. The proprietary app stores, and the apps contained within them, are tailored to meet the code of each operating system

- By definition therefore, the choice of handset by any user determines the operating system within the device and the nature of any pre-loaded app store that the user can access. For example, all Nokia handsets operate on the Symbian operating system, with the Ovi Store pre-loaded on all Nokia smartphones and operated similarly to the Apple Apps Store

- This segmentation by device creates some interesting trends in the app proposition of each device: for example, Blackberry handsets tend to be favoured by professionals and the nature of apps offered by App World is biased towards enterprise apps; by contrast, the apps on Apple's App Store are typically more consumer-oriented

- The interface and functionality of the various app-enabled devices varies significantly and can have implications for the scale of usage. Most market analysts suggest that Apple's hardware is far more user-friendly than competing handsets and the usage of apps on these devices is typically greater than others. As the data opposite illustrates, devices running off Symbian have the highest penetration rate, but Apple users have the highest propensity to access the web via their device

Worldwide smartphone sales, by operating system (2009)

Source: Comscore, M:Metrics

Total shipments of smartphones are forecast to reach c230m in 2010, with Western Europe accounting for 20% of these

Symbian	RIM	iPhone OS	Microsoft Windows Mobile	Linux	Android	Other
47%	20%	14%	9%	5%	4%	1%
Nokia Sony Ericsson	B'berry	iPhone	HTC	Samsung LG	Motorola Samsung LG HTC	Selected handsets

UK smartphone market share & mobile web usage (Q4 2009)

Source: Comscore, M:Metrics

Symbian	RIM	iPhone	Microsoft Windows Mobile	Android
49% / 40%	18% / 19%	19% / 27%	11% / 10%	3% / 4%

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There are many competing app stores, led by the major device manufacturers...

- The number of app stores has boomed since Apple's first entry into the market in 2008, rising from four at the end of 2008 to more than 38 currently

- The device manufacturers were the first to launch app stores, pre-loading their software onto devices, in conjunction with their proprietary operating systems, and using their own brands. All the major handset vendors now have their own app stores, including Apple, RIM and Nokia

- The network operators have subsequently sought to wrest the subscriber relationship away from the app stores, not least as they control the core mobile billing relationship with the end-user, and the launch of device-controlled billing systems (e.g., iTunes) represents a form of threatening disintermediation. Many of the networks have been late to market, and have appeared to be in strategic disarray as they seek to develop app stores that will work across all the handsets/operating systems that they offer their subscribers

- Whilst the majority of app stores are tied to either network or device, there are a number of independent app stores that are unaffiliated to the rest of the value chain. These include offerings from companies such as GetJar and Handango which can be downloaded onto devices by the end-user directly or pre-loaded onto handsets as a white-label service for the smaller end of the network/device market

- Each app store is different in range and quality of apps, revenue model and user interface. Notably, each app store operates a different process of certification for all apps seeking carriage in the store. For example, Google's Android is essentially an open-source app store (and hence it is currently the fastest-growing store), whereas Apple's App Store operates a stricter quality assurance policy and higher charges for the development code. As a result, the nature of any app store is a reflection of operators' policy, consumer demand and the nature of apps development

- The main stores now offer a vast range of apps, although the depth of available apps varies, with Apple retaining its early-move advantage with more than 150,000 apps. In this context, the app stores face a trade-off between offering a large range of apps and providing users with too much choice – recent research by Palm suggests that users are satisfied with a library of 1,500 apps. As the competing stores reach a critical mass of available apps, the focus of competition is shifting to billing, quality of apps and navigation

Major app stores, and number of listed apps (*estimated*)

Apple	•App Store •150,000+
Google	•Android •50,000+
RIM (Blackberry)	•App World •6,000+
Nokia	•Ovi •6,000
Palm	•App Catalog •2,000
Microsoft	•Windows Marketplace •<1,000

"breadth of applications is an important factor, but only to a certain limit, especially given that about 1,500 apps provide enough variety to satisfy most users' demands…" – *Bank of America Merrill Lynch*
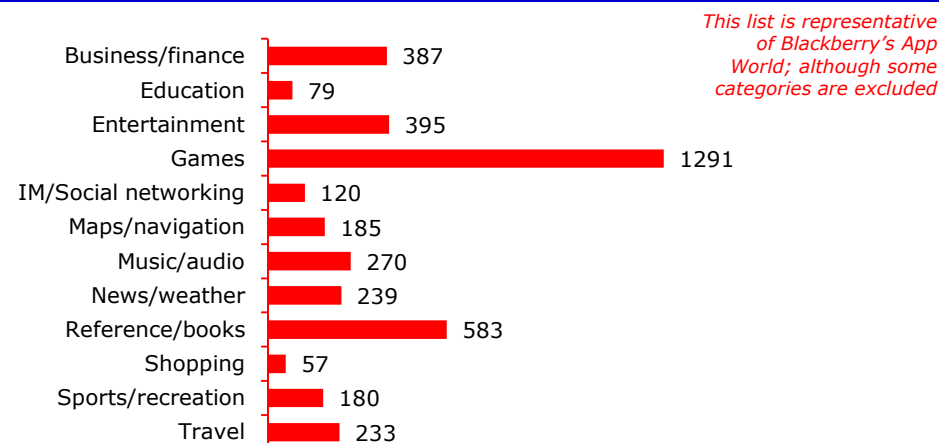
Sources of downloaded content and apps

Worldwide apps downloads, by source (Q1 2010)	
From an app store	39%
From an operator's portal	34%
From a third party content provider	18%
Don't know	9%

Source: Gartner

The array of available apps is huge, across a number of categories from entertainment, information, e-commerce and services...

- Apple's central marketing message, "there's an app for that", confirms – albeit anecdotally – that the market for apps is crowded and multi-genre

- A breakdown of any app store into categories illustrates the range and breadth of services available, including TV and audio content, news, communication, commerce, gaming, maps/navigation, location-specific information, listings, etc.

- ...the source of these apps is vast – from consumer brands and media owners to banks and gaming companies. Crucially, the apps market contains thousands of new entrants, including aggregated content, user-generated content and original produced content. Many of the currently available apps have significant novelty value, centred around gaming, entertainment and "themes"; these have proved initially popular among smartphone subscribers as users continue to experiment with the new functionality

- A burgeoning community of apps developers has ensured that the range of apps continues to expand, a reflection in part of the nature of negotiations between app stores and app developers:

  - There are now broadly-accepted industry standards for revenue shares, which favour the app developer – both in terms of quantum and transparency. Indeed, 70-80% of revenue accrues to the app developer, with the remainder retained by the app store

  - The relatively simple process of certification and submission favoured by most of the app stores lessens barriers to entry further and lessens the time-to-market. We note, however, that the cost of launching apps on multiple operating systems tends to favour the larger established app stores

- The most highly-rated apps vary considerably by app store, and we set out the top-10 paid and free apps from Apple's App Store opposite. This illustrates that users are accessing similar services to those they would online (e.g., social networks, sports information), but notably games are the most popular apps. Indeed, across the entire App Store, gaming represented 58% of all downloaded apps in 2009

Breakdown of app store, by category (*illustrative*)

This list is representative of Blackberry's App World; although some categories are excluded

Category	Value
Business/finance	387
Education	79
Entertainment	395
Games	1291
IM/Social networking	120
Maps/navigation	185
Music/audio	270
News/weather	239
Reference/books	583
Shopping	57
Sports/recreation	180
Travel	233

Highest ranking apps: free vs. pay, by usage (Q2 2009)

Rank	Free	Pay
1	Sky Sports Live Football Score	Camera Genius
2	Waterslide Extreme	Moto X Mayhem
3	Tube Map	Flight Control
4	Sheep Launcher Free!	Ragdoll Blaster
5	Facebook	Minigore
6	Spot the Difference!	WORMS
7	All 60 Games	Internet Radio Box
8	Paper Toss	Civilisation Revolution
9	20Q Mind Reader	Bejeweled 2
10	iGlowStick	Paper Toss: World Tour

Source: Distimo

The market for news apps is crowded and well served by legacy news providers; most news apps are available to download for free...

- The time-sensitive, time-critical nature of news makes it an ideal category for distribution on mobile devices, allowing users to access news content, breaking stories and results on-the-move. More than 75% of internet-enabled mobile users access news and information on their devices

- Web-enabled mobile users have always been able to access news content via browsers; however, small screen sizes and poor navigation hindered the user experience of accessing news pages first designed for consumption on PCs

- Certain online news sites (including the BBC's) sought to offer bespoke mobile web pages, which are repurposed specifically for consumption on a small screen. News providers continue to repurpose their pages for mobile, but the launch of mobile apps has enabled them to offer an even more bespoke and rich user experience

- It is no surprise therefore that the market for mobile news apps is already a crowded one. The range of mobile apps available mirrors the range of online sites, including national and regional press, freesheets, broadcasters, news agencies, magazines and online/mobile only sites. There are approximately 1,500 news apps on Apple's Apple Store and more than 200 news apps on Blackberry's App World; there are 40 free news sites from traditional media owners on the iPhone in the US (from all the TV networks and from leading newspaper publishers)

- Unsurprising too is the popularity of news apps among smartphone users. The BBC estimates that 1.5m UK adults used news apps and 1m used sports apps in January 2010; they also estimate that around 25% of smartphone users accessed news via applications during 2009

- Revenue models vary across the spectrum of news apps, however the majority are freely available – a very recent survey undertaken by Journalism.com found that 24 of the most popular 36 news apps on Apple's App Store were free. In addition, The FT and The Wall Street Journal offer free access to those with an existing offline or online subscription; a notable exception to these trends is the Guardian, whose app is priced at £2.39 on iTunes, although the Guardian's app on Blackberry's App World is available for free. Other paid-for news apps include Al Jazeera, Fox and CNET

News apps in the UK (*selected examples only on App Store*)	
Telegraph mobile	•Free
The Guardian	•Pay (£2.39)
Independent	•Free
Daily Star	•free
Financial Times	•Bundled with FT.com
Wall Street Journal	•Bundled with WSJ.com
New York Times	•Free
Irish Independent	•Pay (£1.79)
Manchester Evening News	•Free
Kent News	•Free
Metro	•Free
Sky News	•Free
ITN News	•Free
CNN Mobile	•Pay (£1.32)
Al Jazeera English	•Pay (£1.79
Thomson Reuters	•Free
Bloomberg	•Free
Associated Press Mobile	•Free
NPR	•Free
Huffington Post	•Free
Yahoo	•Free
Spin Mobile	•Free
Broadersheet	•Pay (£3.31)

We have also looked at the key players in the two other categories in which the BBC is considering launching apps – sports news and AV entertainment

- There is a huge array of sports-related apps within the numerous app stores, across several categories including sports news, information on fixtures, teams and players, games and guides to specific events. As with general news, the market for sports news is increasingly crowded, with significant entry from legacy providers and new application developers

- As an illustration, the forthcoming Football World Cup has seen many premium apps launch including, for example, an official England App (£2.99), several trivia games (£0.59-£0.99) and a premium travel guide to Cape Town (£9.49)

- Many of the sports apps are freely available from brands and from existing sports broadcasters/aggregators. Some apps charge users to download, although in most cases, the content also commands a premium in other windows – live premium sport being the primary example. Basic information on players and fixtures is essentially a commodity and is freely available online and via browsers; as a result, it is unlikely to justify a paid-for model on internet-connected devices

- We set out below an illustrative sample of the major sports news apps on iPhone. The popularity of sports apps will mirror the popularity of particular sports generally, with sports games apps attracting a novelty premium initially

- Although the apps market is relatively new, the app stores contain significant audio-visual (AV) content, spanning many categories and sources

- None of the major commercial public service broadcasters has launched a mobile app as yet, although we believe they intend to do so over time. The ad-funded nature of their online catch-up services suggests that any catch-up app would be freely available. The BBC has launched an iPlayer app Nokia's Ovi store, and repurposed mobile shortcuts and web applications for the iPlayer are available on other devices

- There may be some premium AV apps – such as Sky's live sports channels – however, these are likely to be linked to underlying subscription TV services

- Most AV apps that offer video-rich content are in the short-form category – clips, user-generated content – and this is consistent with network constraints for extensive video either streamed live or available on demand

Sports apps in the UK (selected examples only on App Store)

Sky Sports – Football Score Centre	•Free
Sky Mobile TV News & Sport (live premium channels)	•£6/month
Sky Sports- Cricket Score Centre	•Free
ESPN Score Center	•Free
Eurosport	•Free
UEF.com	•Free
ECB Cricket	•Free
F1 Timing App	•£2.99 (per season)
Wimbledon	•Free
Chelsea FC	•£3.99

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We have identified the key drivers of the market for mobile apps...

- We have identified the key drivers that will determine growth and change in the market for mobile apps, both to date and into the future

- These drivers capture the broader context of network and device convergence, and also the intersection of technological development and changes to consumer behaviour which affect the wider communications and media markets

- The key drivers are set out opposite, and in the pages that follow

Key drivers of the app market

Smartphone penetration

Network coverage and speed

Consumer behaviour

Value chain strategies

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Increasing penetration of smartphones is a primary driver of mobile apps, allowing users to run third-party software on the underlying operating system

- Take-up of smartphones is one of the primary drivers of the apps market, as the consumer access point to mobile networks and the main device on which apps are selected, downloaded and stored

- The UK has the highest growth rate of adoption of smartphones in Europe, with take-up growing 70% in 2009 to more than 11m subscribers – equivalent to 20% of all mobile phone subscribers. Despite Apple's pre-eminent brand position, the market leader in UK smartphone usage remains Nokia, followed by Apple and RIM (Blackberry)

- Consensus forecasts suggest that growth in the take-up of smartphones worldwide will exceed 30% per year between 2010 and 2014, accounting for 26% of all mobile devices by the end of that period. Crucially for the handset manufacturers, Nokia expects smartphones to account for 60-65% of handset revenues in 2011

- Almost all smartphones come with pre-installed app stores (typically tied to the underlying operating system), and they offer the most consumer-friendly way of accessing apps and online content generally

- All the major manufacturers, in Europe, the US and Asia continue to invest heavily in device development and technology; particularly as many of the major players were caught out by Apple's launch of its App Store, and the huge resultant boost to its market share. Such investment is also a response to consumers' increasing desire for greater and greater functionality on their devices

- Google's Erik Schmidt remarked recently "maybe it is time not to speak of smartphones anymore. The smartphone is really not a smartphone. It's really a GPS device, it's a camera, and a video camera and a place that you can play games and you can browse, and oh by the way, you can makes calls. So this new generation of phones have so much power in them, so many activities, they've got so much information on them that it is the defining new category for our industry"

## UK smartphone penetration, by operating system (Q1 2010)

Source: Comscore, M:Metrics

- Android 3%
- Microsoft 10%
- Apple 22%
- RIM 19%
- Symbian 46%
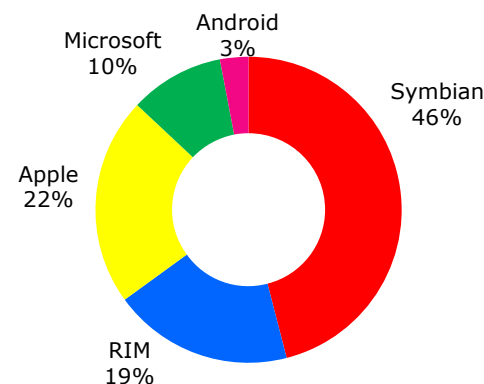
- Symbian is the primary OS for Nokia and Sony Ericsson handsets
- RIM operates on Blackberry devices
- Apple's OS operates the iPhone (and all associated hardware including iPads, iPods and Macs)

Worldwide shipments of smartphones (m handsets)

Source: Bank of America Merrill Lynch

■ Smartphone
■ Non-smartphones

2006 2007 2008 2009 2010 2011 2012
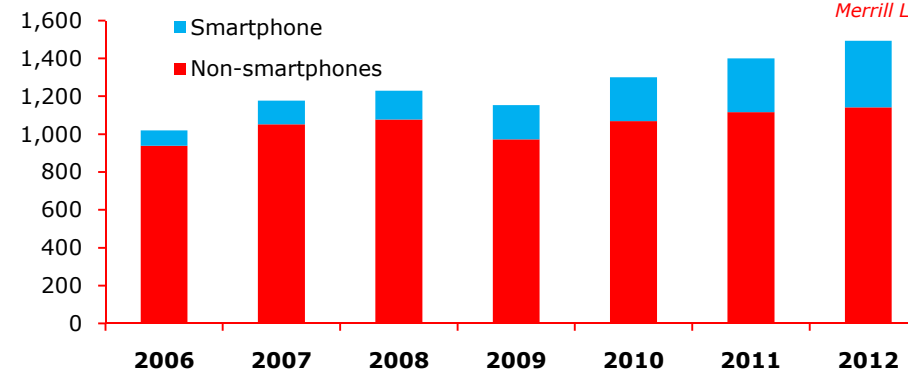
Network coverage is a crucial enabler of consumer demand for apps, ensuring a reliable user experience – particularly for the delivery of data-rich services

- Network coverage and speeds are crucial to enable a reliable and quality mobile experience. This is particularly the case for mobile internet services, and especially where consumers are accessing data-rich content such as video

- As networks became digitised – through the launch of 2G networks initially – mobile networks were able to deliver greater quantities of data wirelessly. However, as smartphone penetration increases and consumption of data-rich services increases, wireless networks have come under increasing pressure from the inevitable contention rates

- As Nielsen writes: "while content is king in media, today network satisfaction is the largest driver of overall satisfaction with the mobile internet. …After cost, network quality is the top reason former data users cancel their data services"

- The roll-out of 3G networks has improved network capability and currently enables users to access the internet at sufficient speeds, thereby greatly improving the quality of the mobile internet experience. The increasing sophistication of mobile apps, and greater use of mobile web browsers, continues to place even these networks under pressure. Many carriers have sought to persuade users to connect their devices to WiFi networks in order to relieve stress on their networks – even though this reduces data charges generated by the user

- As a result, network operators are seeking to roll out so-called 4G networks, designed to offer super-fast delivery of content and services over IP. All the mobile networks are exploring the possibility of bidding for spectrum under Ofcom's Digital Dividend Review, which could give them access to highly efficient spectrum previously used to broadcast analogue television. Such an outcome is subject to an auction by Ofcom, and any plans under DDR are part of a broader approach to spectrum allocation (specifically the re-allocation of existing spectrum to legacy mobile operators) that Ofcom is consulting on.

- The current re-allocation process is also part of the Broadband Britain goals set by the Digital Britain report, whereby wireless is one method of ensuring 2Mb/s access to all homes by 2012

Overview of wireless networks in the UK

| 2G / 2.5G	• Delivered using EDGE or GPRS technology • …intended for voice and text services, but capable of broadband delivery – albeit at slow speeds
3G	• 3G networks were created to enable faster delivery of data-rich services • …offering speeds up to 6 times faster than 2G/2.5G
4G	• Advanced networks (either LTE or WiMax standards) • …offering super-fast reliable IP delivery

3G coverage of the UK, by network

Source: Ofcom

Network	Coverage
Orange	94%
3	91%
T-Mobile	85%
Vodafone	80%
O2	80%
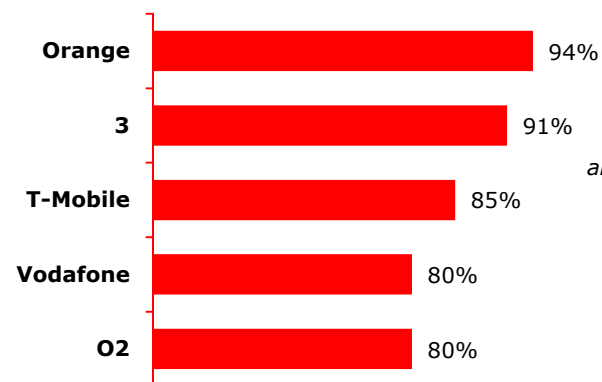
Network speeds vary significantly within 3G networks – sometimes anywhere between 2Mb/s and 10Mb/s
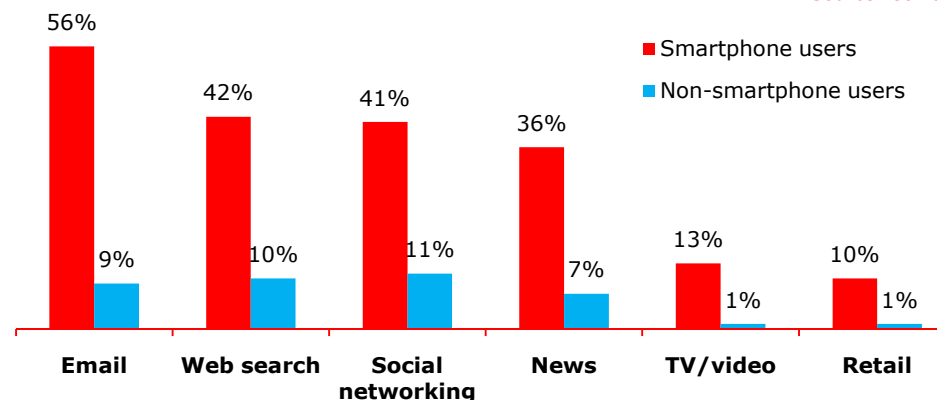
Coverage rates relate to population, not geography

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Changing consumer behaviour has led to demands for greater device functionality and customisation...

- Enabled by more sophisticated handsets and faster networks, users are increasingly accessing the internet via their mobile phones. The demand-side elements of this trend are part of a more general shift in consumer behaviour towards greater control over communication and media consumption. As penetration of mobile phones reaches ubiquity, consumers' expectations of what else the device can offer them (beyond calls and text) have led networks and manufacturers to offer greater functionality

- Moreover, the BBC estimates that people spend 53% more time out of the home than 15 years ago, providing an important context to the upgrade of handsets to enable a much broader and richer range of services to users

- Already to date, handset and network developments have begun to meet users' demands for greater control, with the next generation of smartphones operating as a tool for communication, entertainment and information on-the-move

- The range of activities undertaken on mobile phones is now strikingly similar to what people typically do on their computers, including accessing the internet, emailing and – more recently – downloading software applications onto their device. This provides an important context to the evolving role of the mobile device from a simple communication tool to one of organisation and entertainment. Deloitte suggests that almost half of all users identify mobile devices as one of their three most valuable media and entertainment products

- Enabled with better functionality, it is unsurprising that smartphone users access the internet far more than those without a smartphone. Recent data suggests that smartphone users are six times more likely to email, and four times more likely to search the web, than those without a smartphone. By way of illustration, AT&T has seen an 18-fold increase in its mobile data traffic in the two and a half years since the iPhone was introduced; further, O2 reported an 18-fold increase in data usage in 2009, and estimates that use of its network is doubling every four months

- As with general website usage, smartphone users access a wide range of apps and are promiscuous in their usage; the typical iPhone user has almost 40 apps on his or her device at any one time
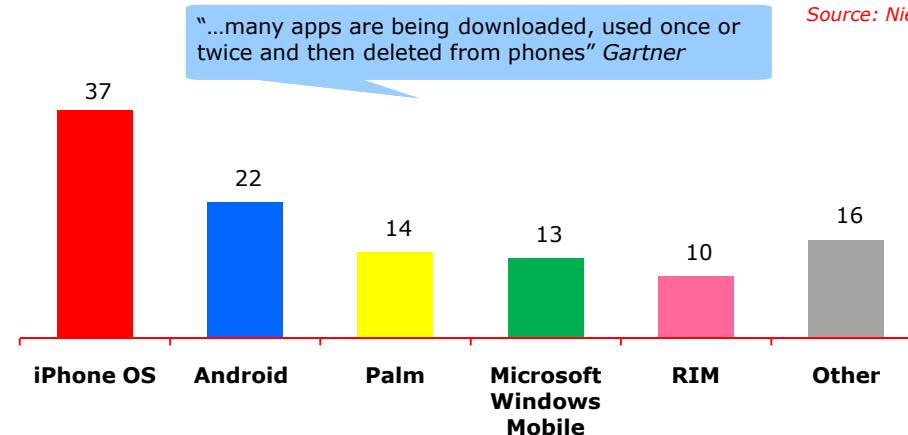
Internet usage, by device (2009)

Source: Comscore

Legend:
- ■ Smartphone users (red)
- ■ Non-smartphone users (blue)

	Email	Web search	Social networking	News	TV/video	Retail
Smartphone users	56%	42%	41%	36%	13%	10%
Non-smartphone users	9%	10%	11%	7%	1%	1%

Average number of apps on the phone, by OS (Q1 09)

Source: Nielsen

"...many apps are being downloaded, used once or twice and then deleted from phones" *Gartner*

iPhone OS	Android	Palm	Microsoft Windows Mobile	RIM	Other
37	22	14	13	10	16

The launch – or carriage – of app stores (and apps) has proven to be a source of competitive advantage for players in the mobile sector...

- The launch of mobile apps reflects a number of complementary commercial strategies by players across the value chain

- As we have witnessed with television operators launching additional functionality beyond linear TV channels, the mobile networks and device manufacturers have sought to improve their consumer propositions in order to drive revenue and retain customer relationships

- The network carriers see apps as a way of retaining customer loyalty and increasing data charges on their networks, while the device manufacturers see their vertically-integrated app stores as a means of driving handset sales and strengthening customer loyalty to mobile handsets. Both sets of operators are hoping that apps will generate additional direct revenues too

- Such trends are crucial determinants of success in the crowded and competitive mobile market, particularly where revenue tariffs are broadly commoditised and networks have to seek alternative sources of gaining competitive advantage. Offering users a compelling suite of apps is a crucial development in this context

- This explains the willingness of networks to offer attractive terms to Apple in return for a period of exclusivity to drive take-up; these exclusive arrangements have largely now ended as Apple seeks scale across multiple networks

- These strategies operate across the "distribution" end of the market – namely, the networks and device operators – however, apps also play an important role in the strategies of non-mobile companies which seek to reach consumers and users outside the home – both to build and maintain brand loyalty and as a potential source of incremental revenues – either direct or through bundling with other non-mobile services. This reflects the standard "follow-the-eyeballs" strategy of content owners, service providers and retail companies all seeking to reach consumers – not just in the home but on-the-move as well

- An overview of the key strategy drivers is set out opposite, including examples

Key operating strategies driving the apps market
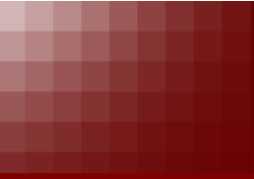
Sales of devices
- Handset manufacturers have launched pre-loaded app stores onto their devices as they seek to strengthen consumer loyalty and drive ARPU
- This is heavily driven by marketing strategies, with Apple's global marketing budget at $500m in 2009

Deepening consumer experience
- The app store is increasingly seen as "must-have" functionality for a device and network contract
- ...this influences operator strategies in an increasingly competitive and commoditising mobile sector – and explains why certain operators have sought to achieve device (and associated app store) exclusivity, notably Apple's early deals with O2 and AT&T
- These strategies represent implicit bundling of app store functionality within pre-existing subscriber contracts, although networks have not offered bundled access to individual apps

Increasing ARPU
- Network carriers have encouraged consumption of data, and thereby greater use of their networks (even at the risk of bottlenecks in the short-term)
- Any propensity to pay incrementally for data, particularly via apps, represents a direct source of revenue for the app store making these available

There are a range of business models in the apps market – along a spectrum of free to pay; many of which are unproven in this nascent market

- A range of business models exist in the apps market, across the spectrum from free to pay. This is perhaps an unsurprising characteristic in light of the exponential growth in the number of apps launched, many of them without a proven revenue model for their application or within their category

- Indeed, far from having a proven revenue model, certain apps have no revenue model at all. As the FT writes: "with developers scrambling for attention in a crowded market, most developers do not make any money. But the allure of reaching a big audience for very little effort has encouraged many to dabble". Such an approach works well for certain "novelty" apps that are developed by individuals; however, this is unsustainable longer-term for data-rich apps which generate ongoing costs

- Furthermore, consumer behaviour in this market is unproven and historically skewed towards early-adopters which tend to display experimental attitudes towards consumer payment models – being more willing to pay for certain things than the mainstream consumer, more trusting of billing mechanisms and also more prepared to search for alternatives should revenue models prove uncompetitive

- The sustainability of business models will also crucially depend on how revenues are shared across the value chain in future (among networks, apps retailers and apps suppliers), the degree to which bundling of content and services evolves in new directions and the costs incurred to deliver content and services across multiple devices, which will dictate required revenues to cover distribution

- We set out an overview of the major business models opposite, including examples of the major categories in each case. There is some early data relating to consumption across the various business models, which we set out overleaf; such data is relatively patchy, as many of the app stores do not release information themselves and we have relied on certain third-party estimates in this case. We return to the future viability of business models in subsequent sections
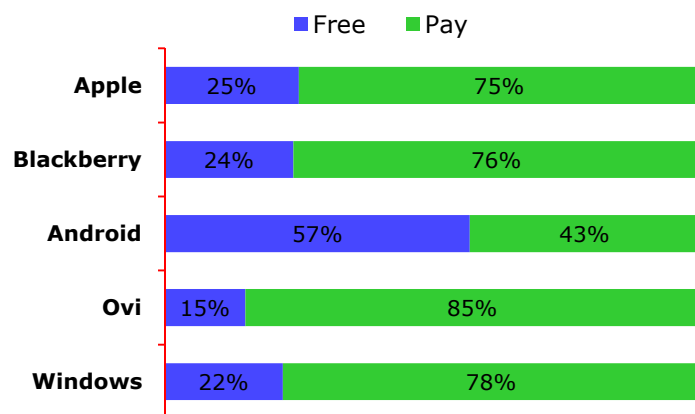
Universe of business models in the apps market

Free models	Pay models	Hybrid models
•Ad-funded apps, including a mixture of impression-driven advertising (CPM metrics), performance-driven advertising (CPC metrics) or promotion-driven advertising (based on fixed negotiations between app and advertiser) •Major advertisers in this space include McDonalds, Volvo, Adidas and Fiat •Other apps serve as brand-building portals for offline companies, with no revenue model per se other than an extension of reach	•Pay-per-app model, including upfront payment for continued access or for metered access, charged via app store's chosen billing system •Ongoing subscription for continuing access to the app (typically accompanied by valued-added services such as continuous update, alerts, up-graded services)	•Fremium: apps are upsold from a demo or limited version to a paid-for version •Bundling: users are given free access to mobile apps if they pay for or subscribe to a service in another media (either offline or online) •Mobile commerce: retail, travel and services apps allow users to transact via their device (e.g., Next, Ocado in the UK)

Source: Mediatique

The range of business models varies by app store, as do price points and the popularity of categories...

Breakdown of available apps, by revenue model

Source: Distimo (2009)

■ Free   ■ Pay

App Store	Free	Pay
Apple	25%	75%
Blackberry	24%	76%
Android	57%	43%
Ovi	15%	85%
Windows	22%	78%

> Paid-for apps outnumber free variants in relation to *availability*, but not in relation to *use* (see overleaf)
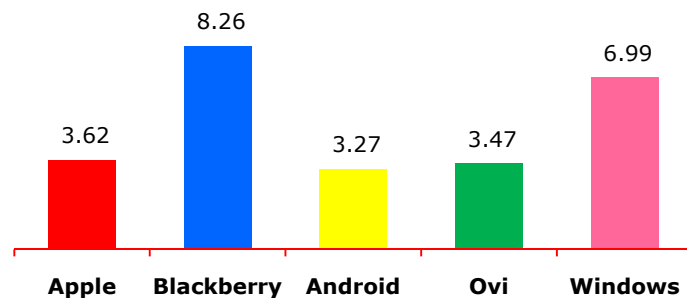
Most popular apps categories

Source: Distimo (2009)

Most popular categories, by app store *(% of apps downloaded)*	
Apple	58% games 18% entertainment
Blackberry	29% games 18% utilities
Ovi	40% personalisation 15% music

Average price for all paid apps ($)

Source: Distimo (2009)

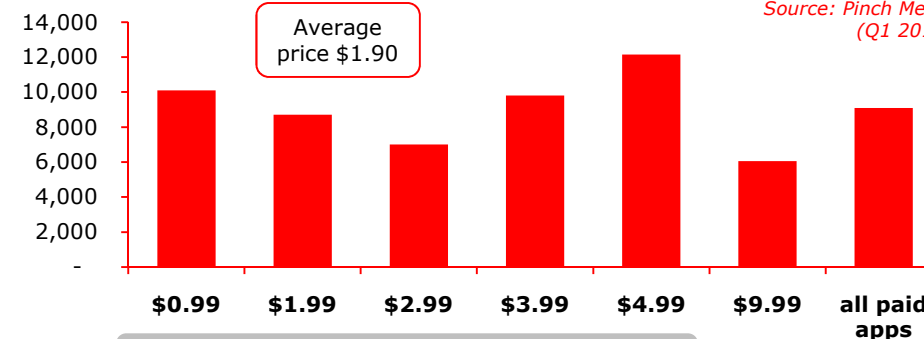| Apple	Blackberry	Android	Ovi	Windows
3.62	8.26	3.27	3.47	6.99

> Average prices vary significantly by app store, reflecting the range and nature of carried apps on each app store

Average paid downloads, per price point

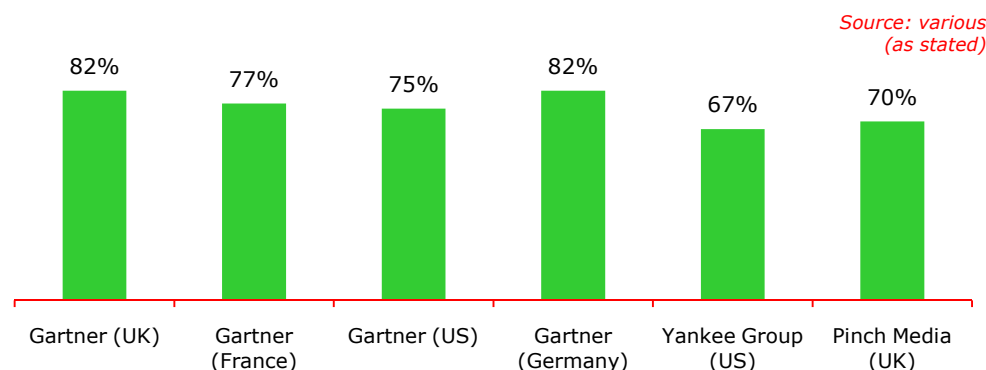*Source: Pinch Media (Q1 2010)*

Average price $1.90

Price points: $0.99, $1.99, $2.99, $3.99, $4.99, $9.99, all paid apps

(Y axis: - to 14,000)

> Users pay for novelty apps (e.g., $0.99)...but are also prepared to pay for quality (e.g., $4.99)

Most available apps require a payment; however, the majority of consumption is free…although some users will pay for certain apps in certain categories

- The market for mobile apps remains relatively nascent, with consumers experimenting with what is essentially a new medium. However, it is possible to draw some early conclusions from consumer data to date

- Despite the numerous revenue models operating across the various app stores, usage of free apps far outweighs pay apps. For example, the average paid-for app within Apple's App Store has generated 9,300 downloads to date worldwide, compared to an average 71,000 downloads for free apps

- Numerous sources confirm that 75%-80% of usage across all apps platforms accrues to free apps; this is disproportionate to the number of free apps available. For example, only 25% of apps on Apple's App Store are free, but these generate 77% of usage across all territories. Indeed, consumption patterns are broadly consistent across major European territories and the US

- The flipside of this trend is that some users are willing to pay for certain apps. Indeed, survey data from AdMob suggests that, on average, iPhone and Android users download eight free apps per month, but also spend approximately $10 on paid-for apps per month

- Consumers have proved more willing to pay for apps in certain genres than others – most notably for games. In addition, apps suppliers have been able to promote paid-for usage via the fremium model – namely by nviting users to use the app for free for a limited time or in limited form, and then inviting payment for further or extended usage

- Other forms of consumer-pay include subscriptions (for example for updated information on a regular basis), location-specific services such as maps/navigation and cinema/restaurant listings and transactional services (including music, ticketing, premium video or mobile apps for existing online retailers such as Amazon)

- We note that the apps market is currently skewed towards young men – as is the case for most data consumption on mobile devices, including music and video; this demographic bias will equalise over time as smartphone penetration increases

% of downloaded apps that are free *(third-party estimates)*

Source: various (as stated)

Gartner (UK)	Gartner (France)	Gartner (US)	Gartner (Germany)	Yankee Group (US)	Pinch Media (UK)
82%	77%	75%	82%	67%	70%

Key genres/models for paid-for apps

Pure pay models work for specific genres…

- "Games remain the number one [paid-for] application, and mobile shopping, social networking, utilities and productivity tools continue to grow and attract increasing amounts of money," (**Gartner, March 2010**)

…elsewhere, the "fremium" model may bolster pay revenues

- "Across all platforms, users [are] most likely to download a paid app if they liked the free version… free-to-paid upgrades are the most cited driver for mobile apps purchases" (**AdMob, Q1 2010**)

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Consumer willingness to pay is typically based on the app's underlying characteristics and the availability of free alternatives – both within the app store and on the web

- Although we have been able to identify the most popular categories of apps within the major app stores, detailed data relating to apps consumption by category is patchy

- All evidence suggests, however, that there is a mixed economy of pay and free apps – with users willing to pay for certain apps within certain categories, while expecting other categories to be free; this is true in all major markets, including those with no equivalent player to the BBC

- We have sought to classify the major categories of apps along a spectrum of free to pay, based on their genre and their underlying characteristics

- The nature of business models for individual apps is primarily driven by their competitive cohort (notably the number/nature of competing apps, including free alternatives) and consumer behaviour (including promiscuity in apps consumption, preference for free vs. pay)

- These drivers are very similar to the experience of pay models in the online sector. In each case, while consumers typically want free access to content, price elasticities will be less for certain categories than others, depending on their genre, characteristics, exclusivity and perceived premium value – as a result, a range of revenue models has emerged, based on content segmentation along a spectrum of commoditised content to premium or specialist content

- Where the content/service of a mobile app is available elsewhere – notably online – we suggest that this has a significant influence on the viability of mobile business models. We note, however, that there are some examples of apps seeking payment from consumers even though they are available free via a mobile browser (or via online). This approach is based on the current willingness of some consumers to pay for the ease of access/ease of use that an app provides, and it is unclear whether this is tenable over time as mobile browsing improves and as competitor business models offer substitutable services via apps for free or bundled with off-platform subscriptions

Key properties determining free vs. pay models

|	High propensity to be pay	High propensity to be free
Characteristics	Exclusive or premium content	General information / content
	Specialist content / knowledge	Commoditised apps
	Location-specific apps	…or those within highly crowded and competitive categories
	Those with pay model on other platforms (e.g., online)	Those with free access elsewhere (e.g., online)
	Those particularly suited to portable consumption	Marketing apps, used for brand building
	Apps that become highly ranked/popular can migrate to pay over time	
	High propensity to be pay	**High propensity to be free**
Illustrative categories	Gaming	General news
	Music	Social networking
	Premium sport	Entertainment
	Adult	General information (e.g., listings, maps)
		Retail / commerce

Source: Mediatique

Revenue from apps remains a small segment of the mobile market, although revenue shares favour a community of software developers and/or media owners

- The prominent role of device manufacturers in launching app stores has led to a fragmented flow-of-funds for apps revenue as the stores have typically developed their own billing systems, or relied on third-party billing systems, rather than use existing network billing relationships

- For example, iPhone uses can purchase apps through an existing iTunes billing relationship; Nokia has attempted to replicate this model through its Ovi Store; Blackberry users are billed via PayPal when purchasing apps through App World; although Vodafone and other network operators are attempting to encourage Apps developers to use its existing billing relationship to handle payments

- Such an outcome is potentially cumbersome for the end-user which, by definition, has an existing billing relationship with the network, but has to set up a new billing relationship with the app store or a third-party. Apple has been able to rely on its legacy iTunes billing system, with iPhone users typically using their device as a media player and a communication device, such that apps sit seamlessly within the overall iTunes experience. Players such as Blackberry cannot rely on existing systems and have had to forge billing relationships with third parties, although they are working with the network carriers to incorporate billing for apps within the primary network billing relationship

- The revenue share for paid-for apps has converged to an industry standard, whereby 70-80% of revenues are retained by the app developer (reimbursed through the billing system) and 20-30% are retained by the app store (either reimbursed through the third-party billing system or retained by the vertically integrated network/device players)

- Revenue sharing arrangements for advertising are more nascent, with display ads and search generally residing in the app itself. To date, the app developers have negotiated advertising deals with advertisers and agencies directly, and have agreed any sharing arrangements with the app store or network

- The direct revenues from paid-for apps provide incremental income for the app store operators and the networks are able to boost ARPU through higher network usage. However, these revenues currently form a tiny subset of total mobile revenues. which generated $860bn worldwide in 2009 (including $220bn of data charges)

Flow of funds for mobile apps

Source: Mediatique
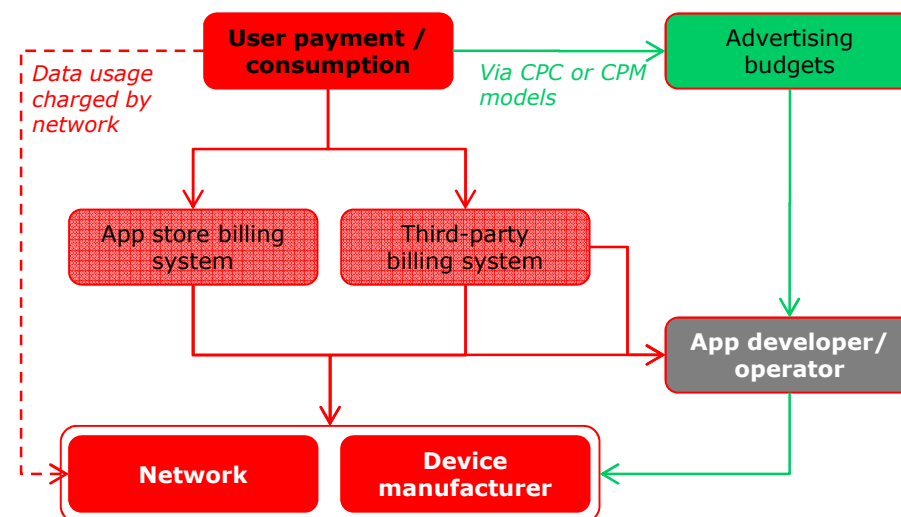
Return to network/OEM depends on ownership or negotiated outcomes; for example, vertically integrated app stores owned by Apple or O2 receive all revenue share from app store; independent app stores negotiates deals with device manufacturers/networks for carriage

Contribution of apps revenue to the mobile sector
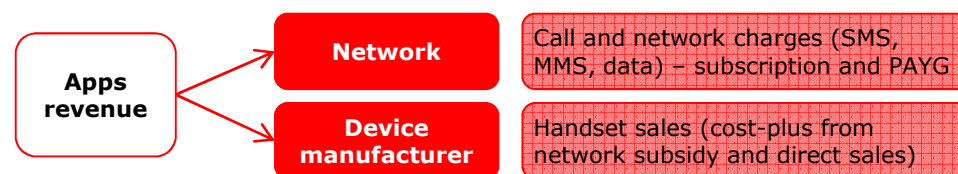
The economics for individual apps remain challenging in light of unproven revenue models, particularly if they are to address all platforms...

- The economics of the apps market, owing principally to its nascent stage of development, are far from clear; in particular, the business model, revenue and cost trends are complicated by overlapping roles by players across the value chain, the multiple routes to mobile content possible (browsers, apps available via internet pages, apps downloadable via text prompts, pre-loaded apps, apps stores) and the unknowable costs of future technological innovation

- It is worth recalling that revenue generation among early adopters in a nascent sector is often untenable once the sector moves toward the mainstream, especially where the premium is being paid for services that are available free elsewhere – notably, in this case, via the internet

- As we discussed on the previous page, the key revenues generated by apps accrue to apps developers (often existing media owners) and "retailers" such as integrated (e.g., Apple, Blackberry) and stand-alone (e.g. Getjar) apps stores; the use of apps, once downloaded, also generate data charges which accrue to network operators

- Network operators are attempting to respond to the disintermediation of their billing relationships by offering apps developers/suppliers access to the operators' own billing mechanisms, permitting for example a charge for apps (one-off and on-going) to be added to the customer's standard network bill. However, the key smartphone device manufacturers all have their own apps stores and operating systems, and therefore capture a significant and growing share of the consumer revenues generated by apps. Complicating this picture is the availability of free apps, both in stores and via mobile web browsing short cuts available in response to a text from the consumer or on the supplier's website

- The resultant market structure has a significant impact on the costs of developing apps specifically for mobile or for re-purposing online content for mobile distribution: while the costs of developing a single app for a single operating system is relatively modest (albeit higher for Apple than for, say, Google's Android), the overall costs for addressing all platforms are by definition higher

- Developers therefore are already tending to target particular operating systems in order to optimise outcomes – in effect "picking winners" – and thereby confirming current market leadership by preferring fast-growing apps environments over smaller market players. Late entrants such as Google's Android are attempting to address their market size disadvantage by making the costs of accessing the platform cheaper than for market leaders such as Symbian, RIM or Apple

- These various dynamics suggest that the market has not yet settled, and could be significantly re-structured over the short to medium term; we consider likely scenarios for future evolution in the following section

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3.   Future evolution

We have considered the future evolution of the apps market – including how business models and consumer behaviour will evolve in the short to medium term

- The market for mobile apps remains immature, with consumer demand uncertain and commercial strategies unproven. In the context of relatively low smartphone penetration and internet usage via mobile – as a proportion of total mobile users and use currently – the major future development will be growth

- This may seem an obvious statement; however, not all analysts expect the market for apps to continue growing and see mobile web browsing as a more effective consumer proposition over the longer term. We doubt this, and believe that the user experience of apps will continue to drive increasing usage – certainly in the short to medium term, even if the ability to generate premium revenues is likely to be untenable

- We have identified some potential evolutionary outcomes for the apps market in the medium term, as we set out opposite and in the pages that follow. These future outcomes have been informed by precedents in the broader mobile and online sectors, and through discussions with players in the market; we stress that we are viewing these developments in the short to medium term, rather than the frankly unknowable longer term

- In order for the dynamics that currently favour apps to alter radically in the short to medium term, a number of changes would need to occur, including:

  - The introduction of easier access via browsers to the entire range of online services – routinely re-purposed for mobile use
  - Greater use of favourites/bookmarks and social recommendation in the face of crowded and chaotic apps stores
  - Far faster speeds for general connections and more efficient video streaming (perhaps through new industry standards)
  - Full integration of downloads, inter-operability of devices, promoted by mobile networks looking to address both home and on-the-move applications
  - Network providers capturing full billing relationship for apps of equivalent functionality, thereby cutting out the retailer "middle men"

Future outcomes in the apps market

The emergence of popular mainstream apps

The convergence of mobile browsing and mobile apps

The continuation of key business models

Consolidation across the value chain

The role of apps as drivers of take-up and loyalty

The role of mobile devices in a broader consumer context

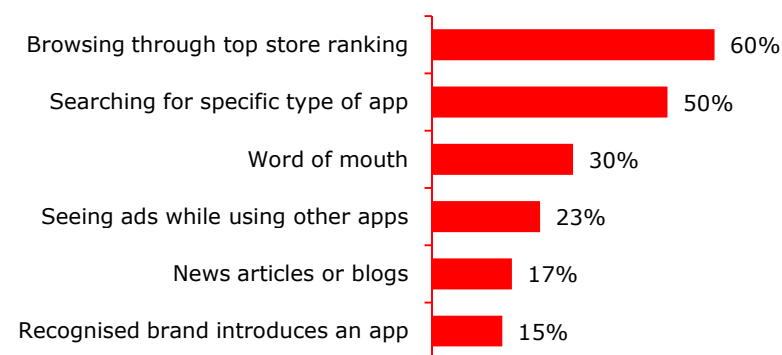*We also consider third-party forecasts for the size of the apps market over time*

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The popularity of apps is often self-fulfilling; as the apps market matures, we expect further convergence of consumer behaviour towards "mainstream" apps

- Certain types of consumer behaviour in the apps market follow legacy consumption trends and patterns, despite its relative immaturity as a platform. As one might expect from any crowded consumer market, Distimo Research confirms that 10% of available apps generate 81% of all usage. Indeed, survey data confirms that success can be self-fulfilling with popularity driving increasing usage, through both word of mouth and through rankings; in addition, brand recognition and prominence are crucial drivers

- In relation to individual apps, however, consumption and popularity is relatively unpredictable and fragmented, a reflection of the market's nascent nature, the user bias towards early-adopters (those traditionally prepared to pay) and the "novelty" factor of many apps/app stores

- Over time, we suggest that consumption of apps will shift towards something approaching predictability. For while there will be an ever-expanding universe of available apps, increasing penetration of smartphones into the mass-market will drive more predictable consumption outcomes. Those apps that one would expect to feature highly in any representative app store will do so, such as those dedicated to news, sports results, timely information and communication. The long tail will of course continue to populate app stores and will generate usage in niche categories

- We do maintain, however, that the depth and range of the current app stores is likely to be sustained; even as certain apps fail and leave the market, new apps will continue to be developed. App stores will invest heavily in search functionality to cut through the vast libraries of available apps; BofA Merrill Lynch suggests that "the sheer number of available applications will lead over time to a growing emphasis and growing investment to improve the discovery process of applications". This increases the pressure on apps developers to create compelling quality apps that users want or need

- Finally, while the app market continues to grow, it is inevitable that browser technologies and billing strategies developed in particular by network operators will combine to limit the ability of the apps market to continue to price at a premium

Drivers of app usage

Source: AdMob survey (2009)

How do you discover the apps you want to download?

Browsing through top store ranking — 60%
Searching for specific type of app — 50%
Word of mouth — 30%
Seeing ads while using other apps — 23%
News articles or blogs — 17%
Recognised brand introduces an app — 15%

A future breakdown of apps consumption *(illustrative)*

A residual category of the ever-replacing long tail will contain a huge number of apps with limited usage

Certain niche apps may prove successful particularly those designed wholly for mobile platforms, without a pre-existing popularity

The most popular apps are likely to feature existing mass-market brands from media, social networking, news and information …displaying similar consumption trends to those evident in the online (PC) space
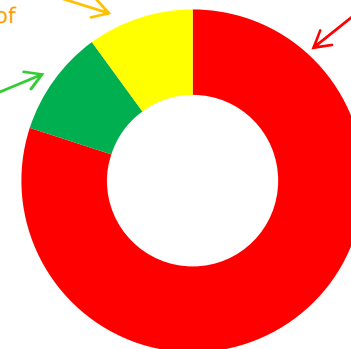
Source: Mediatique

While the apps market currently evinces characteristics distinct from mobile browsing, dynamics are likely to converge over time as browsers improve

- Much of the content – and many of the services – available via mobile apps are not "new", but are repurposed formats of content available elsewhere. For many years, enabled users have been able to access much of this content via mobile web browsers and, even today, mobile apps sit alongside mobile browser capabilities on the handset

- Navigation trends are ultimately determined by the consumer seeking out the content that they want – if it is not available via an app store then they will use a web browser to find it

- Indeed, the apps market is a sub-set of the broader market for mobile content. What differentiates apps is their bespoke nature, their findability within a central app store, and their position on the handset once downloaded (in contrast to the equivalent web "favourites" listed on browser toolbars). The current user experience of web browsing is ostensibly far more clunky than that of searching an app store

  - Nielsen suggests that the average mobile internet user visited 5.5 websites per month in 2008, compared to more than 100 websites on their PC; whilst there are a number of reasons for this to be the case, it does suggest that mobile is not necessarily the most user-friendly platform for generalised web search

- Although there is much industry debate on the issue of whether apps will entirely replace mobile browsing as a source of content, we suggest that the distinguishing characteristics of apps will diminish over time, as device manufacturers continue to invest in the development of mobile web browsing technology and browsing functionality improves over time

- In any event, a hybrid ecosystem is likely to develop with certain categories suited to apps (e.g., games, data-rich media and paid-for services), while others may be content with web-based services that run in browsers rather than native to the device. In any event, part of this broad ecosystem will involve convergent technology; particularly as app stores become increasingly crowded, they are likely to incorporate much of the search functionality inherent in web browsing
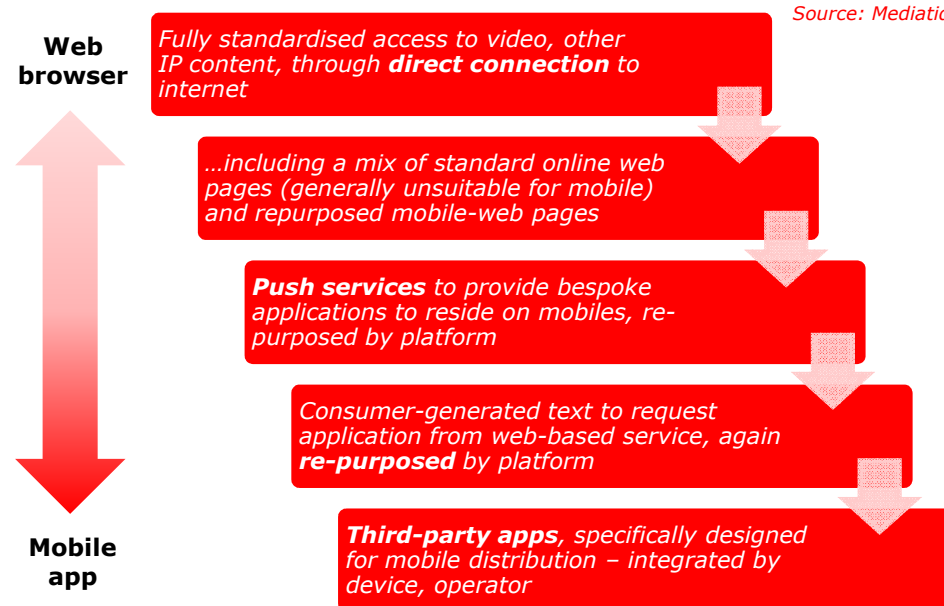
The battle between search and apps…

"on a mobile device, search is not where it's at, not like on the desktop. [instead, people are] using apps to get to data on the internet, not generalised search "

Steve Jobs, Apple

The spectrum of mobile distribution for online content

Source: Mediatique

Web browser

*Fully standardised access to video, other IP content, through **direct connection** to internet*

…including a mix of standard online web pages (generally unsuitable for mobile) and repurposed mobile-web pages

***Push services** to provide bespoke applications to reside on mobiles, re-purposed by platform*

*Consumer-generated text to request application from web-based service, again **re-purposed** by platform*

***Third-party apps**, specifically designed for mobile distribution – integrated by device, operator*

Mobile app

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We expect the apps market will continue its bias towards free consumption – as the market reaches critical mass and new entrants compete away any premia...

- Whilst forecasting the future revenue outcomes of a nascent market is fraught with difficulties, we expect the apps market to become even more skewed towards free models, as opposed to pay (and in all major markets)

- Notwithstanding that some users will always be willing to pay for certain apps within certain categories – notably, for games, premium content and novelty apps – the market's bias towards free consumption is likely to continue. Gartner's estimate of the proportion of apps consumption that is free is increases from 80% to 87% by 2013

- Experience from the online sector confirms that consumers are typically unwilling to pay for content where there are free alternatives. In an increasingly crowded apps market, enabled by search functionality within the app store, users will be able to make clear choices among those apps that require payment and those that offer similar content free of charge

- The move toward free will be enhanced by competition from suppliers able to secure other revenues in place of consumer payment, including bundled services (with, for example, subscriptions off-platform)

- Recent data from Distimo Monitor points towards deflation in apps ARPU, with the average price of the most popular apps on Apple falling 15% between December and February 2010. We suggest this is a reflection of a commoditising market and part of a general shift towards free consumption for all but premium applications

- Even though the costs of developing and launching an app on any given platform have not proved prohibitive, it goes without saying that apps require a corresponding revenue model in order to survive. As a result, we expect free apps to generate increasing revenues from advertising, mobile commerce and sophisticated bundling strategies

- Even now, with e-commerce mechanisms unproven and the mobile advertising market very small, the reach of retail sites on iPhones is more than 10% and advertising contributes 12% of total apps revenue. As these markets develop, the ability of apps to survive on a free model looks more certain

Drivers towards a free market

The mobile advertising market remains small, as apps developers experiment with inventory and ad placement, and advertisers remain unconvinced of its potential. This is likely to improve, with better creative and efficient targeting – coupled with increasing smartphone penetration forcing advertisers to reach consumers via mobile. Total mobile advertising revenues were £37m in 2009; however, as advertiser demand grows, free apps are likely to benefit

Smartphone users are typically promiscuous in their consumption of apps – with the average iPhone user downloading eight apps per month and running approximately 40 apps on their phone at any one time. As app stores remain crowded and competitive sources of content (sustained by few barriers to entry), pay models may come under pressure as users substitute these apps for free ones in certain categories

In line with increasing smartphone penetration, companies with existing customer relationships will target mobile users as means of extending their reach and promoting their brands in a new environment. Such companies are likely to be big players in the free apps market launching bundled apps (where users get free access to an app where they have an existing subscription elsewhere) or apps which are free to download but rely on revenues from elsewhere (e.g., e-commerce)

"From a marketing and content point of view, we predict an explosion of content and massive surge in the use of mobile applications by established brands and brand agencies" – *Patrick Monk, Getjar*

"Today, tech-savvy users flock to download the mobile apps they need and have no qualms about paying for them online. Down the road, non-tech types may be more wary of paying for apps, a trend that could pave the way for more ad-generated free apps" – *CNET news*

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We expect the crowded and fragmented apps market to consolidate over time –as a result of both corporate failure and strategic M&A

- As we set out earlier, the mobile apps market is crowded and heavily fragmented. Since the launch of the first app store in 2008, there has been a rush to market across the value chain, from the launch of app stores by network operators, device manufacturers and independents to an explosion in the development and launch of individual apps

- Even in this context, the number of app stores continues to increase, as the subscriber-facing elements of the value chain see the provision of an app store as a must-have for users. Equally, countless thousands of apps have launched across the numerous operating systems without a clear or proven revenue model for the medium or long term

- These trends create significant pressure on the current market structure. Getjar, one of the leading independent app stores, highlights "our concern […] that certain players are getting into the app business more to ride the hype but without a clear understanding of what the consumer wants, what resources are needed internally to manage or grow this business or without a solid understanding of what developers need to be successful in this space"

- We expect the market to experience a number of structural developments, as it consolidates from its currently fragmented state:

  – A number of app stores and apps will fail in the short to medium term, owing to unproven revenue models or inability to replicate more compelling functionality. Competition among app stores will likely favour those which are vertically integrated with networks and/or devices that can offer depth of choice and effective billing systems

  – The market will further consolidate through strategic M&A activity, particularly at the level of handset manufacturers and operating systems. Whilst not a driver of consolidation in itself, the number of operating systems on which the multiple app stores sit forces apps to develop different versions for each system – this imposes additional costs on developers, too often forcing them to pick winners among the competing app stores: this is potentially unsustainable

Consolidating trends along the value chain

Network
- Many of the larger UK carriers are already working together to forge common standards for apps (through the Wholesale Applications Community) and may do so on a more formal basis over time
- The recent merger of Orange and T-Mobile represents a fundamental consolidation of power among the carriers

Handset vendors & operating systems
- All the major OEMs continue to develop and launch more enabled devices, ensuring significant competition and choice for the consumer
- This has sustained numerous operating systems, however – currently 6/7 established OS. This has cost implications for application developers, the networks and consumers that wish to switch devices: consolidation to 2 or 3 OS is inevitable over time

App stores
- "…we predict a large number of app stores will fail over the next 12 months or so. Being successful in the apps business requires scale, a global reach, a deep product catalogue, a solid value proposition for developers and content owners and a seamless way to deliver content to consumers quickly and cheaply" *Getjar*

Device manufacturers will seek to engage customer loyalty via apps; but over time, competitive advantage will likely diminish as all smartphones converge to offer app functionality

- Mobile users historically displayed significant loyalty to their network provider, by virtue of their primary billing relationship with the end user; this is despite recent changes to telco regulation making network switching easier. By contrast, any loyalty towards handsets has tended to be on practical grounds such as swapping battery chargers and users' familiarity with handset experience and navigation – but also affected by retailer/handset arrangements, including subsidies and upgrades

- The launch of smartphones has changed dynamics as the inherent sophistication of these new devices has enabled far greater differentiation among competing manufacturers. Indeed, the recent cases of networks securing exclusive access to particular handsets – the iPhone being the primary example – proves that devices are increasingly important in consumers' decision making

- Implicit within these trends are consumers' decisions relating to the content and functionality offered by various handsets, including the depth and range of mobile apps. Apple was able to forge an early-mover advantage in this regard, by launching its App Store ahead of the other devices. This has shifted loyalty from network to device, and emphasized competition among devices

- As mobile apps become *de facto* standard for all smartphone devices, this competitive advantage is likely to be countered, as all device manufacturers seek to incorporate quality app stores into their consumer proposition. Research by BofA Merrill Lynch suggests that all smartphone operators will have a *de minimis* quantity of compelling apps within their stores; as a result, whilst the availability of apps is evidently a driver of consumer take-up and satisfaction, moves by the networks and manufacturers to ensure that the "best" apps are offered within their stores will create a more level-playing field in competition

- Indeed, the consumer proposition and user experience of any given app store will form part of broader range of factors that consumers consider when choosing their handset and network relationship. For example, recent research by Nielsen suggests that "improved battery life is the single most important enhancement to be made to their mobile device…followed by larger screen size, more memory capacity and better data inputs"

Convergence of app stores mitigates their power…

"in the nascent growth phase of the smartphone market, we believe the breadth of applications can become a differentiating factor, and the perception of (Apple's) 100,000 apps is hard to counter"

"[however], when it comes to mass-market applications we do not believe that there will be any differences in the depth of applications offered by the surviving application stores.

Bank of America Merrill Lynch (December 2009)

Consumer loyalty is fragmenting…

TNS' Global Telecoms Insights (March 2010)

- 33% of UK mobile users see content and applications – such as games, music and maps – as an important decision factor when choosing their next mobile handset.

- In fact, 13% of UK mobile users consider content and applications to be the single most important handset purchase consideration, compared to only 9% who pick their phone based on the model of handset and 12% who make their choice based on the network operator

- This confirms the growing power of content and application providers in the mobile sector, where almost a fifth (19%) of users regularly download applications – more than those that download ringtones (17%) and caller tunes (13%)

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Mobile devices may take on a larger role in coordinating entertainment and communication over time – with implications for the apps market

- Underlying many of the issues we address in this report is the changing role of mobile platforms in delivering content and services in replacement of other distribution networks, including fixed-network online

- Poor network reliability and lack of standards have meant that mobile delivery has moved in incremental stages of development, most recently hastened by the take-up of smartphones and the growth of apps

- There are very real opportunities, however, for mobile to take a far greater role not only in providing content and services on-the-move, but more widely for in-home and in-office delivery as well

- A transition point in this context may be the introduction of e-readers and the iPad, representing a hybrid PC/smartphone device able to organise and deploy content and services delivered wirelessly; over time, these devices could evolve into home "ports" for the management of entertainment and services, including everything from video-on-demand to social networking

- For example, mobile could provide the basis for ensuring inter-operability of devices in the home (TV, audio, PC, mobile) and represent a crucial way of organising media and communications – characterising the mobile device as "life's remote control"

- The evolving role of mobile devices generally will have implications for the nature of app development and technical standards over time, as apps purchased via a mobile app store may ultimately be consumed on alternative devices.

- An impetus for these outcomes would be the efforts by network operators to wrest back control of billing relationships from apps stores and integrated handset/OS players, working directly with content and service providers

- This role would require the bandwidth and speed that LTE developments may usher in. Such developments will be critical to all legacy content players (including the BBC), as they would to tend to erode the value of traditional means of distribution (broadcast, satellite, fixed line)

Life's remote control: a future role for mobile

The mobile device already acts as a remote controlled organisation device for certain platforms – for example, Sky's Remote Record allows subscribers to set their Sky+ preferences via their mobile device

Over time, as wireless networks become even more robust and device technology converges, the mobile may take an even greater role in coordinating consumption among all media devices – this extends not just to organisation, but ultimately to the selection and purchase/download of content and services

Such trends suggest, for example, that content chosen from a mobile app may end up being watched on the TV or home PC

Content & services selected from app store…

*…for consumption in-home & on-the-move…*

Source: Mediatique

Several third-party forecasters expect significant growth in the apps market over time...

- Our observations relating to the evolutionary trends in the apps market are broadly qualitative, and we have not forecast revenue or consumption trends over time, other than to suggest that the market will grow exponentially in the short to medium term

- It is worth bearing in mind that the smartphone sub-sector is growing rapidly but from a relatively small base and there is likely to a significant number of consumers who do not make the transition in the short to medium term; these late adopters may have access to increased functionality, but probably well short of the cutting edge

- This suggests a relatively large market still dependent on traditional means of delivery of content and services – which has important implications for the BBC and other legacy content providers

- While our evaluation of future evolution has been qualitative, we have nonetheless collated a number of third-party forecasts in relation to the consumption of apps and associated revenue generation. There is large variation in revenue outputs among the various forecasts, although unsurprisingly the general consensus is one of significant market growth. These consensus forecasts suggest that total worldwide apps revenue will reach somewhere in the region of $15-20bn by 2013/14; this compares to total apps revenue of less than $5bn currently

- Gartner estimates that total apps revenue will reach $30bn by 2013, with advertising revenues contributing $6.5bn of this amount; notably, however, they forecast free apps to represent approximately 90% of consumption but only 20% of revenues in that year. This corroborates our view that the market will trend towards a free model for consumption, although there are significant revenue opportunities for paid-for premium and specialist apps

- These forecasts underline the nascent nature of the mobile advertising market, which will need to develop significantly if it is to offset the (in our view inevitable) decline in paid-for mobile applications

Global apps revenue – consensus forecasts ($bn)

Source: various (as stated)
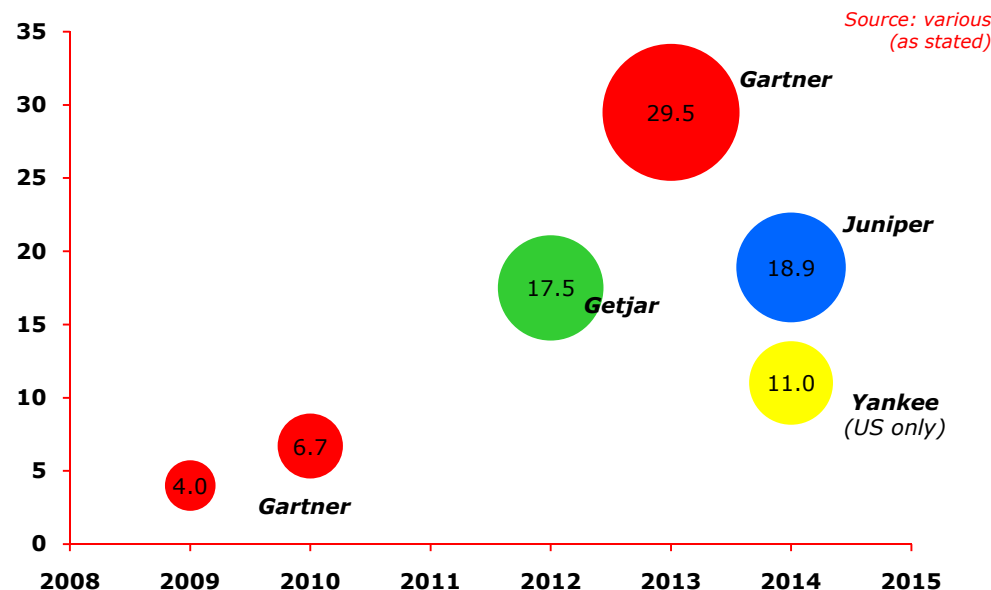
Forecasts of the UK's share of these revenues are not readily available. For context, Western Europe's share of the smartphone market was only 20% in 2009, and is set to decline over time as developing markets take a larger share. Moreover, even though propensities to pay for apps are fairly consistent across territories, pricing trends vary significantly – average prices for the most popular apps on App Store are $2.59 in Asia, $2.43 in North America and almost $3.70 in Europe

These trends suggest that the apps market in Western Europe could reach revenues of c$6bn by 2013; on a read-across of the UK's GDP share as a proportion of Europe, the UK market could be worth c$800m (i.e., not accounting for any out-performance of mobile in the UK)

4. Implications for the BBC

The BBC is proposing to launch a number of mobile apps – initially for distribution on the iPhone

- The BBC is intending to launch mobile apps, initially for BBC news and BBC sport, for initial distribution to the iPhone. The BBC had hoped to launch the BBC news app in time for the parliamentary elections on 6 May 2010, with the sports app available by the time of the World Cup in June 2010. The apps are intended to be free at the point of consumption, and will carry no advertising

- While the proposal is concentrated on these two apps, initially on the iPhone platform, it is the BBC's clear intention to introduce other apps (specifically the iPlayer but perhaps other applications later) and to address, eventually, all operating systems over time

- The BBC specifically recognises that the iPhone is the fastest growing smartphone application platform, and is seeking to launch there first. The intention to move to other operating systems is conditional upon issues to do with technology – including the ease/complexity of addressing platforms – and "brand protection criteria"

  – We note that the BBC points to the launch of the iPad as a source of increased market penetration – although the BBC intends to invest only modestly to upgrade the video experience for iPad use

- In its application to the Trust, the BBC specifically excludes detailed consideration of BBC Worldwide's commercial app developments

- The Trust application is detailed as to the plans on news and sport, and articulates more briefly a strategy in relation to the iPlayer; plans to extend the distribution footprint to other operating systems and to deepen the available content accessible via apps are far sketchier; we note that the BBC sets out its view explicitly that "enabling audiences to access existing BBC online content via smartphone applications" is not a "new service or a significant change to the BBC UK's public services, requiring regulatory scrutiny via a Public Value Test"

- We have analysed potential effects of the BBC's apps strategy on the market. We have not considered issues around compliance and state aid, and concentrate instead on issues around potential competitive impact in broad terms

The BBC's plans for mobile apps

The **news app** would provide access to the BBC's existing website content (emphasising local, national and international news, breaking news, commentary, on-demand AV content, live streaming of BBC News channel), with the ability to personalise the service; there had been an intention to provide election-specific services (live feeds of the leaders' debates, election results as they are available on the night)

The **sports app** would equally provide access to existing website content and would include live match AV, World Cup clips on demand, other sports content (subject to rights clearance), commentary, Radio 5 Live feeds, access to blogs, etc. Following advice from Fair Trading, the app would not feature "push" elements such as alerts (at least not at launch)

The **iPlayer app** is scheduled for later in 2010, and builds on existing access via mobile browsers (where the feed is optimised for mobile) and the app already launched (in Q3 2009) on the Nokia Ovi store

Give the BBC's absence from the apps market to date, our major observations of the likely trends and dynamics constitute an implicit counter-factual in the event of non-entry by the BBC

Our preliminary market observations

The mobile apps market is nascent and small, but is growing rapidly

Key drivers of the apps market are ease of use, ease of access, portability and mobility

Key content and service categories include: communication, games, location-specific services (e.g., maps/navigation, listings), news, video and audio

While there are a number of mobile-exclusive apps, much of the content available via apps is re-purposed content from the internet, and is accessible via mobile web browsers in addition to bespoke apps

There are a number of different revenue models across the value chain for mobile delivery of content and services, including micro-pay, premium-pay, subscription, ad-funded; although the sector has yet to settle on a coherent structure

Paid for apps outnumber free apps in terms of availability, whilst the majority of usage remains free

The number of app stores is growing quickly, led by integrated device/OS providers – as is the range and depth of available apps within these stores. Network operators have been laggards but are offering their own app stores integrated into existing billing relationships

Key likely sources of future change will be:
• Improvement in the delivery of mobile services generally, allowing faster more reliable delivery of data-rich content/services
• Industry consolidation across the value chain
• Consumer preferences for free over pay, accelerated by increasing availability of free substitutes from online and bundled offerings from apps providers
• An increasing emphasis on navigation and findability, as app stores become increasingly crowded
• Efforts by network operators to re-capture billing relationships

It is likely that to date the revenues generated by mobile apps have largely been either new or directly poached from other mobile and online revenues; for example, in the case of advertising, there is unlikely yet to have been any displacement (given the sector's tiny size) other than from digital expenditure by advertisers

We conclude that, for the short to medium term, mobile apps will continue to grow as a proportion of total mobile content and service delivery and the revenue model will tend to trend "free", with advertising substituting for online rather than traditional categories and increased income from certain specialist categories and from transactional services

Critically, we do not envisage providers of content such as news and sport to be able to charge for mobile delivery while their online services remain free; therefore, broader trends in industry's attempts to introduce charging models for online services will have a direct impact on any ability to charge for relevant mobile apps over time

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A number of third parties have criticised the BBC's plans to launch apps. Whilst not defending the BBC, we set out below our market observations in relation to these complaints

In identifying the nature of these criticisms, we have made reference to a formal complaint by the Newspaper Publishers' Association to the BBC Trust in April 2010

Criticism	Mediatique observations
The apps market is a new market, which the BBC might distort	The dynamics of mobile and online distribution are typically different, and services are often tailored as a result; however, much of the content is the same and mobile apps for news and sport rely heavily on re-purposed online content. In addition, consumer preferences towards multiple services and free access are relatively similar
Mobile apps are one-to-one distribution, not broadcasting	Distribution to mobile devices over IP is no different to IP-distribution to the PC, and the launch of mobile apps is in the same vein as the BBC's current re-purposing of online pages for mobile consumption –indeed, all smartphone users can already access BBC content via their web browsers
The BBC's entry represents a threat to plurality	The market for mobile news apps is already extremely crowded and competitive, with consumers increasingly promiscuous in relation to their news consumption – typically relying on several sites and search engines, often skimming news headlines
The BBC's target audience for apps is already well served	We note that the NPA/Guardian complaint suggests that the BBC's apps will benefit the "digital elite of affluent, mainly white male users [which...] does not increase the BBC's reach". The BBC's ability to reach these audiences in its linear schedule is under increasing threat, however, and continues to decline – on this basis, this is precisely the audience that the BBC needs to target better to ensure its universality
The BBC's entry would foreclose pay options, by promoting free	The market for mobile apps already has a mixed economy of free, pay and hybrid models, although the vast majority of consumer usage is based on free access. These trends are evident in the mobile apps market, even though the BBC has yet to forge a presence
The BBC is able to cross-promote its apps unfairly	The BBC will indeed benefit from its pre-existing brand and its presence on other distribution platforms, including linear TV, non-linear TV and online. It remains to be seen on what basis the BBC can cross-promote its apps, particularly in the short-term where they will only be available on selected operating systems. Notably, however, all legacy news providers are able to cross-promote their devices, and no news provider – whether from TV, press or online – has an entitlement to market share within the apps market
BBCWW should not have launched an app internationally	BBCWW is specifically mandated to use BBC content which it has licensed to generate revenues in certain domestic markets and more widely overseas. The US app is ad-supported and limited geographically, which ensures there is no bleed of the service to the UK market. The Guardian may be competing against BBCWW in international Apps markets but that is true in all other sectors too

Although the BBC faces criticism from a number of commercial players, we suggest that it's entry is unlikely to have a marked impact on market trends

- A number of consistent dynamics in the apps market – in particular the predominance of free consumption – have materialised in the absence of the BBC's presence to date

- The BBC's proposed entry into the apps market has met with criticism as we have seen – particularly relating to the BBC's potential influence on the successful operation of pay models. However, we stress that the BBC would be entering a market that is already trending towards free apps for news, sport and long-form video content, and this trend is likely to continue over time, irrespective of the BBC's entry

- Moreover, we suggest that the BBC has an obligation to provide its content to mobile-internet users, of which mobile apps are the fastest-growing segment of that market. Such an obligation relates to the BBC's stated Public Purposes and its distribution strategy as a major producer and distributor of content – as we set out opposite

- In spite of this, however, it remains possible that the BBC's launch of mobile apps will have some market impact, including displacement effects; we review these potential impacts overleaf

The BBC should be in the mobile apps market

Licence fee payers expect to be able to access BBC content on multiple platforms

- The BBC's remit is to provide its accurate, impartial and extensive news services to licence fee payers, through broadcasting and online distribution; by any definition, accessing the internet and internet content via mobile is a subset of the latter
- Indeed, the Royal Charter obliges the BBC to make its content "generally available" and in the context of increasing consumption online and via mobile devices, the BBC is justified on Public Purposes grounds to address its users on these fast-growing platforms

The BBC would be entering an already competitive market

- The popularity of the BBC's apps may mirror the emergence of BBC Online as a leading site for news consumption to the PC; however, as with online, the BBC remains one of many sources used by a promiscuous universe of content consumers, and other sites that offer their services for free continue to grow in popularity
- Many of the BBC's cohort of news/content providers already operate within the mobile content sector, and most commercial players have refined their strategies to follow consumers across all viable platforms. In this context, the BBC's strategy should be to make its content available on mobile platforms in order to retain reach
- Numerous legacy offline news providers offer their content to mobile users; however, as with the online space, no such player has an entitlement to success in the apps market – this notably includes existing newspaper groups, but also the BBC!

The BBC seeks to retain control over its content

- The BBC claims in its submission to the Trust that its lack of news and sport apps risks damaging the BBC's reputation, as there are already unapproved applications available, using BBC content without concomitant brand control exercised by the BBC. We agree with this argument, as smartphone users will increasingly expect to be able to access BBC content via an app – and if this is not available via the BBC, they are likely to seek alternative routes to BBC content

We have not undertaken a full (or formal) market impact assessment; however, we have considered the potential effects of the BBC's plans on the apps market

The BBC may take some share from competing news apps

...although the BBC's content is already available on mobile devices

- The BBC's quality content, depth of news coverage, strong brand in AV and its ability to cross-promote its services suggest that its apps will be popular and may take share from competing providers of news and sport content

- However, users are currently able to consume BBC content (and other competing news content) via their mobile web browsers alongside the app stores and the BBC remains one of many sources used by a promiscuous population in the online space

- Indeed, the BBC is only one source of free news/sport content available on mobile devices: users can access competing news services via mobile-web browsers or through the apps stores. The latter is already a very crowded and competitive market, and the BBC's entry into the apps market would see it competing with several legacy players and new entrants. Furthermore, any displacement effects are likely to be spread across this fragmented universe

The BBC is unlikely to influence business models, which are already predominantly free

- Consumer behaviour in relation to apps confirms an existing bias towards free consumption; this is particularly true in relation to news where users are promiscuous and will visit many competing sites. Such trends are evident in the online news market, where users use multiple sites and search engines in order to avoid paying for general news

- This trend toward free consumption of news content is also already observable in the apps market, even without the BBC's presence to date. Indeed, the "window" available to commercial suppliers of news and sport to charge for mobile apps is severely limited in those cases where their own content – and competing content – is available for free online through mobile web browsers

- Notwithstanding that there are current examples of mobile news apps charging, we expect the market will evolve away from any chargeable premium for such apps owing to competing bundling strategies from legacy offline/online providers and the presence of major content providers with free propositions. In addition, as mobile apps emerge into the mainstream, consumer preferences towards free will become even more engrained into the market, as early-adopters' greater propensity to pay becomes marginalised

The BBC's plans could distort the devices market, however

- The sequence and timing of the launch of BBC apps on the various competing platforms and operating systems may have differential effects on market outcomes. These effects could arise from the BBC's popularity as a destination app, compounded by any cross-promotion that the BBC may undertake to market such apps

- The BBC's plans to launch on the iPhone initially may distort competition among device manufacturers by creating *de facto,* if time-limited, exclusivity

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5.   Conclusions

Public Purpose outcomes are likely on balance to outweigh any potential negative market impacts of the BBC's market entry

- The market for mobile apps is nascent, business models are at an early stage of development and consumer preferences are still fluid. Nevertheless, users seem to prefer the experience offered by mobile apps, compared to mobile web browsing, implicitly proven by the growth rate of apps within the space

- Despite criticism from commercial news providers, we remain sceptical that the BBC will distort the apps market, particularly in relation to the evolution of business models

- There are numerous business models observable to date in apps, including paid-for downloads, free access and bundled access with other services such as newspaper subscriptions. However, the majority of usage remains free, with users opting to pay for apps within selected categories such as games, or for content for which there are few competing free alternatives

- This trend partly reflects the high degree of user promiscuity within the apps market, with users downloading and sampling a range of apps. As with the online market, this is particularly true for news content, as consumers typically use multiple sources to obtain their news and sport content

- In the course of our analysis, we have identified a number of likely future dynamics that will continue to favour free over pay for news and sports apps. We note, too, that the market for apps has already developed a bias towards free access for this content, even though the BBC has yet to enter the market

- We similarly conclude that the AV market in mobile will be small and, certainly in relation to long-form original TV content such as that available via the iPlayer, will trend free (ad-supported) in line with the experience of all similar "player" models in the online environment. In any event, viewing shares in mobile distribution are likely, certainly over the short to medium term, to co-relate closely to those generated in linear and online non-linear markets generally, and are thus unlikely to create competitive concerns about *incremental* impact

- Given the nascent nature of the apps market, however, the BBC's plans to launch mobile apps could have future impacts on the market:

  – The BBC's strong brand and ability to cross-promote may give it advantages in terms of gaining popularity – this may become entrenched over time owing to the perpetual availability of apps and their longevity on devices. This popularity could come conceivably at the expense of other players

  – The sequence and timing of the BBC's introduction of apps for platforms other than the iPhone could have the effect of introducing *de facto* exclusivity (even if only for a time)

- While the market impact of the BBC's plans is difficult to fully ascertain at this stage – particularly given the immaturity of the apps market – we suggest that the BBC could mitigate those areas of significant market impact via its execution strategy. Further identification and evaluation of such mitigating factors is beyond the scope of our analysis, however

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- We work with companies across the media and communications sector, providing strategic advice, corporate finance services and general market intelligence

- Our clients include some of the biggest names in UK media, including major broadcasters, rights owners, regulators, independent production companies, publishers, new media companies, brokers and private equity firms

- We are authorised and regulated by the Financial Services Authority

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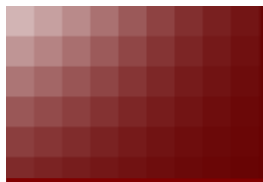
Mediatique Ltd
21 Little Portland Street
London W1W 8BT

Telephone: +44 (0)20 7291 6900
Facsimile: +44 (0)20 7291 6901
www.mediatique.co.uk