

Mobile content services market in Finland 2011-2015

June 2012

Preface	3	Mobile applications market in Finland	15	Mobile marketing	33
Introduction	4	Top applications in Finland	17	Mobile device base	36
Definitions	5	Application market revenue	22	Mobile payment method benchmark	41
Summary	6	Examples of application downloads	24	Mobile payment method benchmark	42
Key trends and headlines in mobile context services	8	Average application usage in different countries	27	Survey on IP billing	44
Key phenomena and future opportunities in mobile space	9	Premium SMS services and premium rate call services	28	Interviews and sources	45
Premium rate calls and SMS bring the bulk of revenue – applications and banners drive the growth	11	Premium SMS services	29		
Mobile browsing booming	12	Premium rate call service	31		
Rapidly changing device base	13				

This report looks at mobile content services market in Finland with a broad scope. The market size and market drivers for mobile content services, mobile marketing and mobile device base are studied in the report. Market size for mobile content services is presented mainly for the years 2010-2015, some statistics may cover also earlier years. The market data for the years 2008-2011 are actual figures based on data gathered for this and earlier reports. Years 2012-2015 are forecasts based on market analysis and up-to-date information available on the market. All the market figures and other content in this report are based on analysis made by Idean Enterprises consultants and represent their views and opinions.

The report is a multi-client study commissioned by the Ministry of Transport and Communications in Finland, Ministry of Employment and the Economy and Teleforum ry.

The purpose of the report is to provide an overall view on the mobile content market dynamics in Finland. The report aims to help players in the mobile content market to develop current and new services based on solid understanding on the market. The report's focus is in the mobile commerce, i. e. services that are targeted to bring direct or indirect revenue. However, it also helps players that plan to provide non-commercial services.

The report is carried out as a combination of desktop and interview study in May - June 2012. The report's findings are based on in-depth interviews with players in the mobile content market and other market experts as well as Idean's database on mobile content services. Additionally, research regarding premium content services provided by TNS Gallup has served as a basis for the analysis. All this data has been complemented with publicly available sources. Kalle Snellman, Senior Strategist at Idean is the author of the report. Idean's Project Assistant Lauri Lankinen and Senior Visual designer Leo Hakola have created the visual and page layout.

The author would like to thank all interviewees for devoting their time and effort in contribution to this report.

Preface

Introduction

Mobile services have been topical since the late 1990's. During the first ten years mobile commerce was dominated by a handful of players specialized in mobile content. The situation has now changed as an increasing share of the total online consumption is moving into mobile devices. This trend affects practically all organizations from different industries. Many of the companies and authorities that have ignored or taken only minimal steps in the first phase of the mobile services, have now implemented mobile services or have serious plans for implementations. As a matter of fact, all organizations have become more or less technology oriented and dependant. Idean believes that the next technological focus area is mobile.

The current media coverage on mobile issues draws a picture of mobile application dominated mobile commerce. This is not a full picture, though. The mobile applications represent only a small share of the total mobile originated content revenue. The majority of the revenue is still delivered by premium rate calls and SMS based services. On the other hand, only a part of the mobile services are expected to bring direct revenues.

This report looks at the mobile content services in Finland, and in particular how the services are monetized, since the monetization is where many of the companies are struggling. It is important to have relevant, up-to-date and consistent information regarding the mobile market in order to make solid and well-reasoned business plans and decisions.



Definitions

Mobile content market value represents the end-user spending on mobile services within the viewed distribution channels. Spending on SMS based content services, premium rate calls and application stores are in the scope of the report. Media spending on mobile marketing channels are also included in the market value.

Mobile advertising market value. The market value of mobile advertising consists of expenditure on mobile media. In other words, the money spent on SMS traffic, search and banners in a mobile media space. Mobile site design and other similar costs related to mobile marketing are excluded from the market value.

Mobile marketing market value is the combined marketer spending on mobile advertising and customer relationship communications.

Smartphone is a mobile phone built on a mobile computing platform with more advanced computing abilities and connectivity than a feature phone has. One of the most significant differences is that the advanced application programming interfaces (APIs) on smartphones for running third-party applications can allow those applications to have better integration with the phone's OS and hardware than typical feature phones. Currently the smartphones include devices with the following operating systems: iOS, Android, Windows Phone, Symbian, BlackBerry OS and Meego.

Feature phone is defined to cover all other mobile phones than smartphones in this report.

Summary

The mobile content service market in Finland roots back to early 1990's, when premium rate calls emerged. The first SMS based logos and ringtones were delivered over the mobile networks in the latter part of 1990's. Approximately ten years later appeared application stores for smartphones. All these markets co-exist today and in the near future.

The demand for premium rate calls and premium SMS services have saturated and the demand is gradually declining. At the same time the overall usage of mobile services is growing strongly. Mobile applications and browsing are among the fastest growing mobile services. This doesn't necessarily transform to revenue since major share of the applications and internet browsing is free of charge. More specifically, an increasing share of services apply business models that are not targeted to bring direct revenue.

The split between service categories reveals relative slowness in the transformation of the mobile content services. The most traditional services among these,

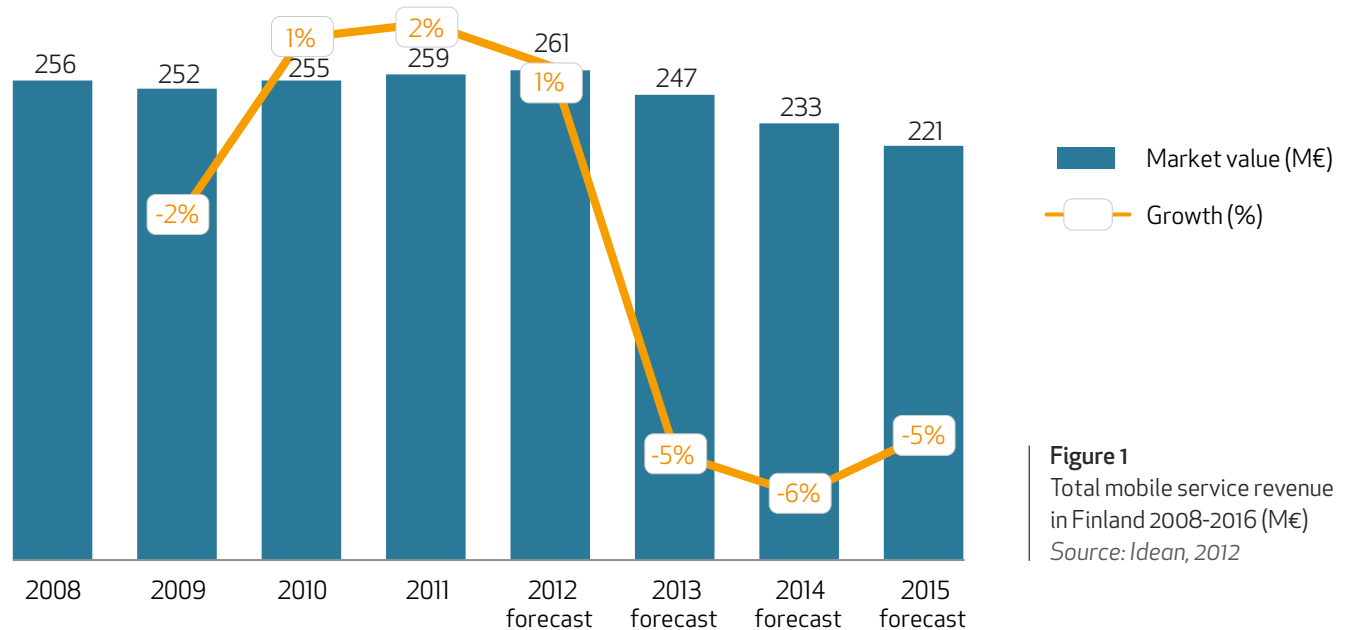


Figure 1
Total mobile service revenue
in Finland 2008-2016 (M€)
Source: Idean, 2012

premium rate calls and premium SMS are bringing the majority of the revenue despite the shift in the service providers' focus on mobile applications and sites. In 2011 these two leading categories represented 94% of the total service revenue in Finland. Their share is gradually decreasing, but they are forecast to still take about 80% of the total revenue in 2015.

The market for premium rate calls has a long and successful history, which has been unfairly

overshadowed by the more hyped markets, such as premium SMS and mobile application stores. Premium rate calls represented two thirds of the total mobile services revenue in 2011 and the total revenue was approximately 170 million euros. The total revenue trend has been slowly decreasing, but the fall is forecast to accelerate towards the end of the forecasted period of 2012-2015. Directory services were the leading service category and represented a good half of the total market revenue in 2011.

Against the general expectations, the market value for premium SMS services has not dropped during the last couple of years. In fact, it has remained rather stable and even showed a mild growth. In 2011 the total market value was 70 million euros, which is one per cent up from the previous year. In the coming years the SMS revenue is forecast to decline as some of the most lucrative SMS services migrate to application and browser based services.

The combined mobile applications market value in Finland was four million euros in 2011, including revenue from Apple's App Store for iPhone and

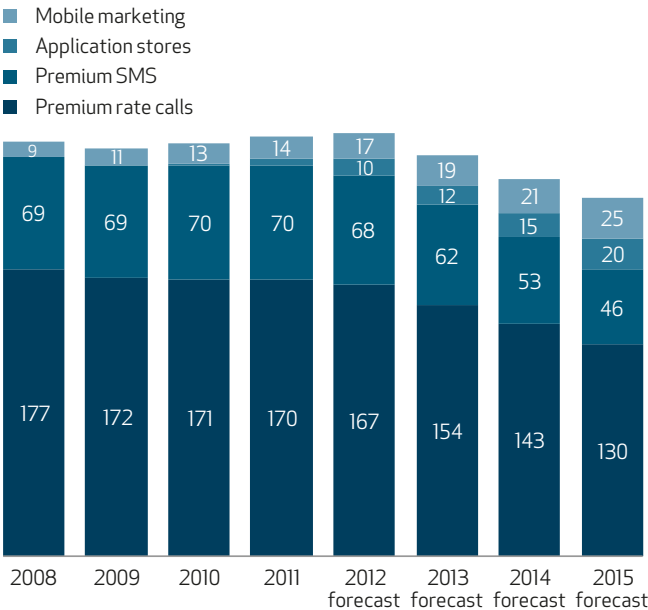


Figure 2 | Total mobile services revenue by category in Finland 2008-2015 (M€)
Source: Idean, 2012

iPad, Google Play, Nokia Store and Windows Phone 7 Marketplace. Apple's App Store was the largest in revenue among the viewed ones, with approximately 57% share of the total revenue in 2011. Application stores' revenues are predominantly global, since only a minority of the top 100 application publishers are Finnish. Games was the most popular application category within all of the viewed application stores.

Mobile marketing is growing steadily. In 2011 the total marketing spending was 14 million euros, which is 10% more than in the previous year. SMS based forms of mobile marketing bring majority of the

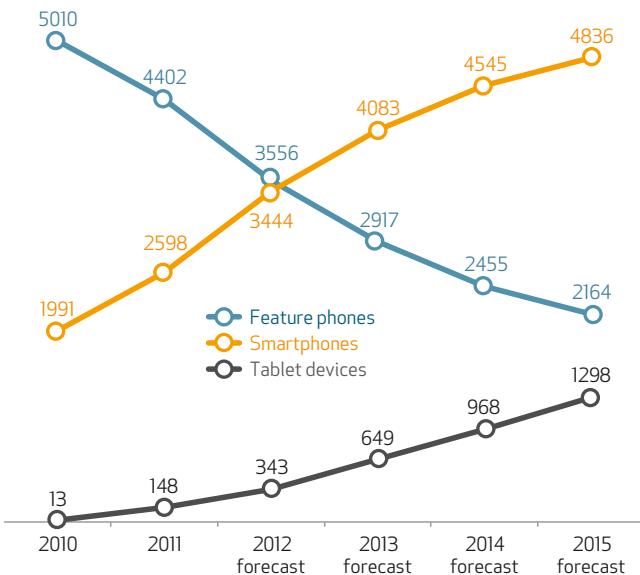


Figure 3 | Installed base of feature phones, smartphones and tablet devices in Finland 2010-2015 (thousands)
Source: Idean, 2012

revenue today, but display and search marketing are forecast to show strongest growth in the future. The total mobile marketing spending is forecast to reach 19 million euros in 2015. Customer relationship communications is the largest category among mobile marketing. Currently its share is over 60% and in 2015 it is still forecast to represent over 40% of total mobile marketing spending.

Mobile device base has a strong influence in the mobile content service uptake and development. Currently the most interesting and important information is the installed base of smartphones, since many of the new services are targeted on this segment. Also tablet devices are in the center of attention. The total installed base of smartphones in Finland was approximately 2,6 million and represented 37% of the total mobile device base of seven million in 2011. Smartphones are forecast to outnumber feature phones in the beginning of 2013. The tablet device sales boomed in 2011 and the total installed base was approximately 150 000 tablets in the end of 2011. The growth of smartphone and tablet device base is expected to remain strong in the near future.

KEY TRENDS AND HEADLINES IN MOBILE CONTENT SERVICES

●	Key phenomena and future opportunities in mobile space	9
●	Premium rate calls and SMS bring the bulk of revenue – apps and banners drive the growth	11
●	Mobile browsing booming	12
●	Rapidly changing device base	13

Key phenomena and future opportunities in mobile space

The key developments, opportunities and other current issues are discussed in this chapter. The aim is to give an insight on the topical issues in the market and to provide the reader an overall view on some of the broader issues.



The mobile services market has experienced major developments and changes during the last couple of years. New advanced services have emerged and the usage of services is strongly growing. There are even greater changes in sight if we look at the future opportunities for mobile service development.

In Idean's opinion, mobile devices are becoming a fundamental hub for various future services – even more elementary than the current desktop devices. There are several reasons why mobile devices are superior to desktop and laptop computing. Mobile devices are personal in their nature, always available and online and context aware (e.g. location information). Mobile devices provide an ideal channel for the future services, as the digital services are in general moving into a more personalized and context aware mode.

Figure 4 on the next page combines and summarizes Idean's view on the key phenomena and drivers in the future service design. Idean has identified four major phenomena in sight that will impact the future of mobile service design. These phenomena include several technology related drivers which are placed

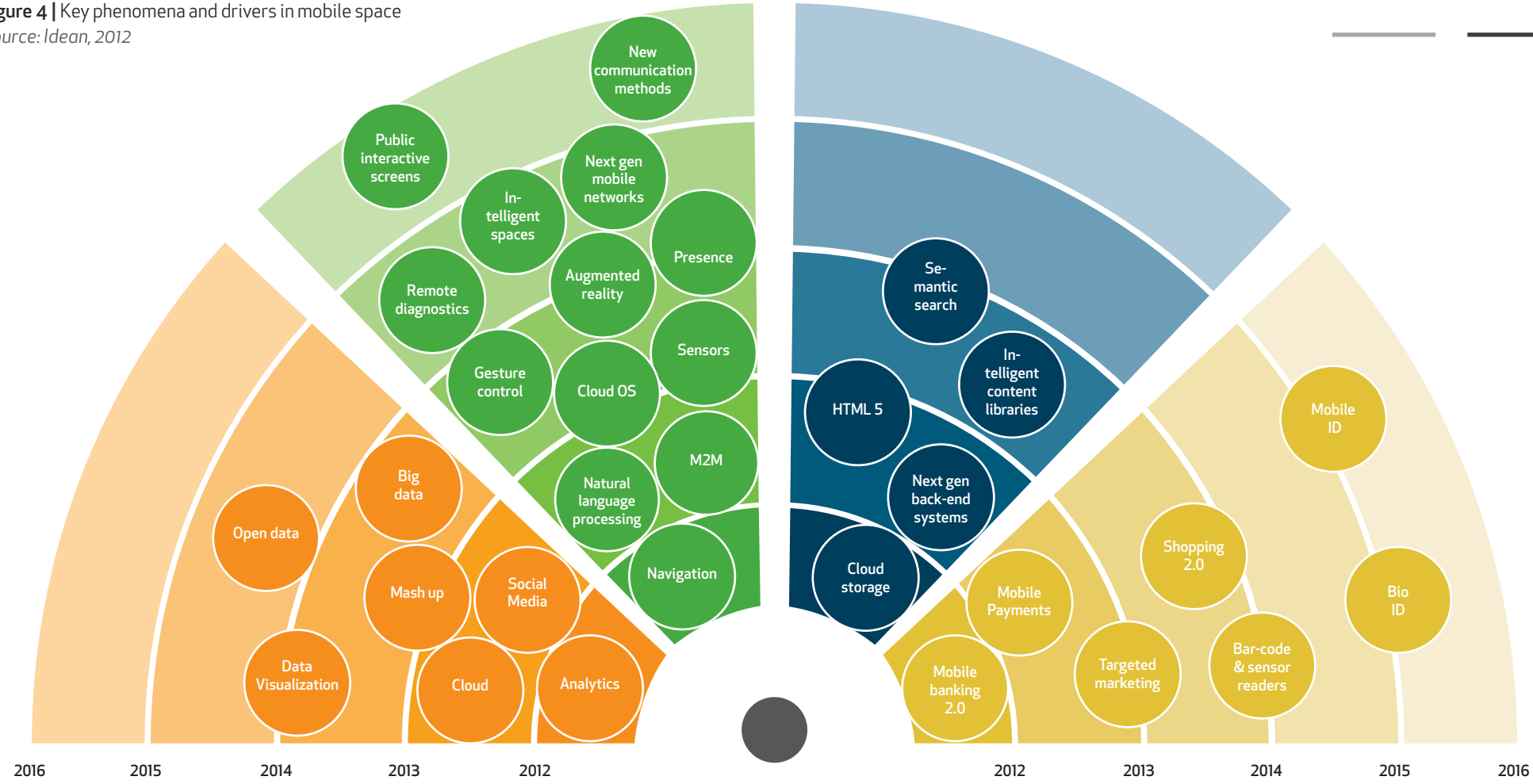
in the timeline where they are expected to have significant impact.

Perhaps the most significant individual driver in the figure is the Bio ID. Identification is a key component in a large number of services. If a mobile device can make a strong biometric authentication in a fast and easy way, then the need for passwords, pin-codes and user names gradually disappear. This would have repercussions in various fields of mobile and online services. For example, mobile devices could replace the need for cash.

There are serious early attempts to this direction. For example, iCache Inc., a US-based company has released an iPhone case and application that enable biometric secured credit card payments. This digital wallet can store all sorts of card information into iPhone and is accompanied with fingerprint biometric security element.

It wouldn't be hard to imagine that the next generation smartphones would have an embedded bio ID, or perhaps a combination of two complementary biometric security elements.

Figure 4 | Key phenomena and drivers in mobile space
Source: Idean, 2012



Data driven service business
Data is becoming a key driver for service design and functionality. The ability to gather and manage large masses of data is becoming a pivotal competitive advantage as services become increasingly personalized and context aware. At the same time there is an increasing amount of data available, both in-house and open data. In the future the data will open ever-increasing opportunities for new services.

Real-time, context aware and anticipatory services
The services will become richer and provide personalized targeted information and services for various situations. Their potential is especially significant in mobile use cases, since mobile devices are more personal and rich in their capabilities. This phenomenon is strongly linked to the data driven service business phenomenon.

Unlimited media content supply
Content business is moving towards services that provide unlimited content supply for the users. At the same time the services will become increasingly personalized and targeted. The changing and unclear status of content rights is slowing down the development though.

Mobile driven consumer business
Mobile use will reach and pass desktop use of services in the near future thanks to device and service development. New mobile services will have an ability to replace many of the current everyday concepts, such as cash, credit card, keys, and many others.

Premium rate calls and SMS bring the bulk of revenue

– applications and banners drive the growth

Premium rate calls and SMS based services are still representing the bulk of the mobile commerce despite the trending application stores and mobile banners. In 2011 the application stores and mobile banners together represented approximately two per cent of the total mobile content market value. By the end of 2016 their projected share is expected to rise up to 16 per cent of the total market.

The market is divided into three sections in figure 5. The premium rate calls category represents the end-user spending on premium voice services. SMS based services include the combined end-user and mobile ad spending on SMS based content services and marketing together. Application stores and mobile banners include the end-user and mobile ad spending on SMS based content services and marketing together.

In the big picture, the market for premium rate calls and SMS based services is gradually decreasing and the one for mobile applications and banner advertising keeps growing. However, there are several exceptions for this rule. Some SMS based service areas are still showing good growth.

In practical terms, SMS based services and premium rate calls are invoiced in the mobile phone subscription bill. These services are more populated by Finnish market players, whereas the nature of application store business is global. Consequently, the balance of domestic and global players seems to be turning into the global one's advantage as the commerce moves into new channels.

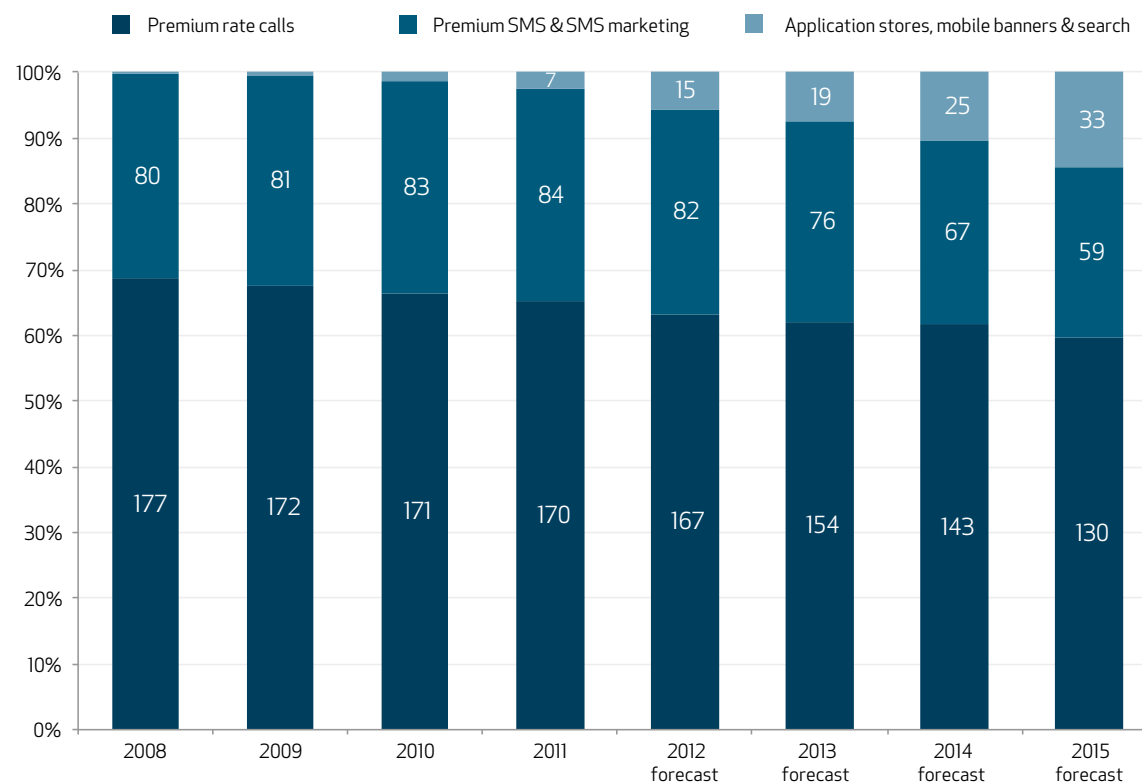


Figure 5 | Mobile services market by distribution method in Finland 2008-2016 (M€)

Source: Idean, 2012

Note! The numbers in the figure represent combined revenue and advertising spending by distribution technology.

Mobile browsing booming

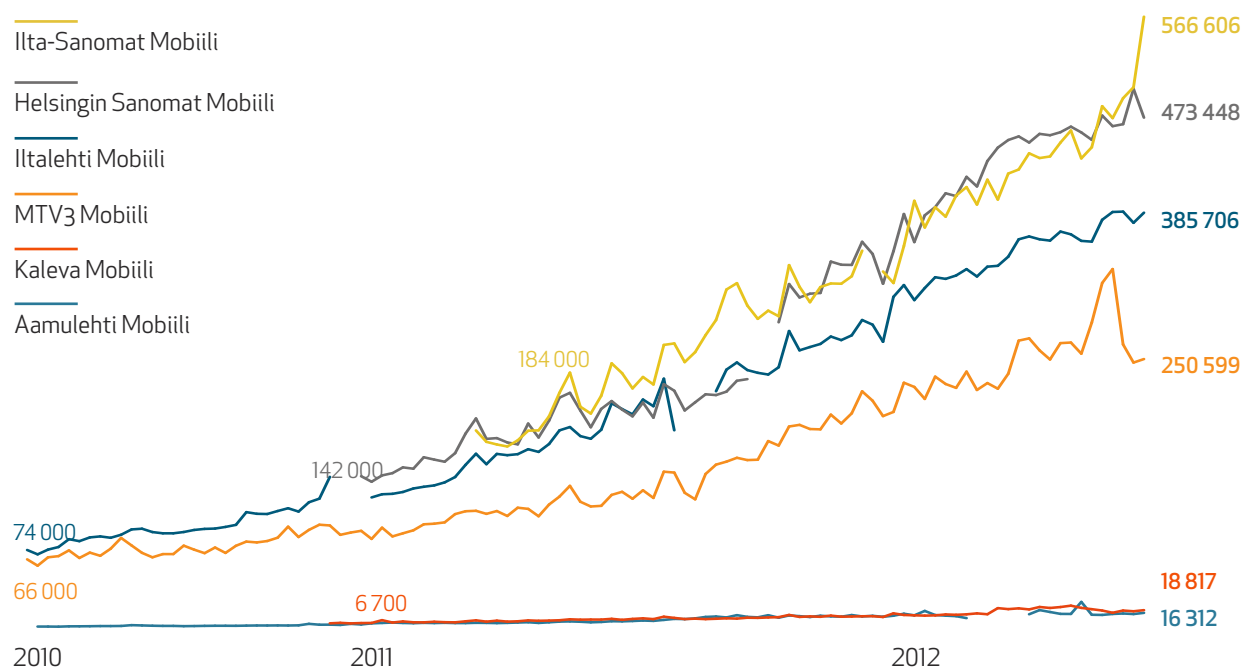


Figure 6 | Weekly visitors for selected mobile sites. (different browsers during 20/2010 - 23/2012) *Source: TNS-Metrix, Idean, 2012*

Mobile browsing has boomed in the past couple of years and continues growing. In May 2012, the leading mobile sites attracted approximately half million different browser visits per week. These numbers include both mobile site and mobile application visitors. During the past two years the number of different browser visits have increased roughly

fivefold on average. This illustrates the impact of the changing device base and improved browsing capabilities. Smartphones and tablets are creating a momentum for the mobile browser based services.

The growth rates in mobile sites are outpacing the corresponding desktop sites and one can foresee

that mobile will pass desktop browsing within a couple of years. Currently, in May 2012, it seems like the growth in the top desktop news sites has stalled. This may be caused by general market saturation as a majority of Finns are browsing news sites regularly. Another explanation may be mobile sites' cannibalising effect on the corresponding desktop sites. Some of the former desktop site visitors are using mobile sites instead of desktop. The user count development is strongly dividing players. Few top sites are taking a major share of the total traffic, whereas the rest will have to settle for rather humble visitor numbers. The same trend is evident in the desktop sites. In practice, the consequence is that only some top sites will collect a vast majority of the advertising revenue and have a better chance to become financially viable with the current business models.

On the other hand, there is a clear monetization gap looming in mobile advertising space if the current online advertising migrates into mobile. The mobile devices and their smaller screens provide less advertising space and thus bring less advertising revenue per user. This is especially relevant for the current type of banner advertising formats. New advertising formats may change the pattern though.

Rapidly changing device base

Smartphones and tablet devices are currently making their way to masses. Over one third of the Finnish mobile phone base consisted of smartphones in the end of 2011 and over a half of the mobile phones sold here in 2011 were smartphones. Lately, the leading mobile phone operators have indicated that smartphones represent over two thirds of their total mobile phone sales.

Finland has a reputation of having advanced mobile user and device base. This image is about to crumble. Despite the ongoing fast uptake of smartphones in Finland it seems that many other countries have outpaced Finland in this respect. A recent study provided by Google indicates that Finland is lagging behind in smartphone penetration compared to many other Western European countries in Q1 2012. Finland was the least smartphone penetrated Nordic country among the benchmarked in 2012

The smartphone penetration grew rapidly in all of the studied countries between 2011 and 2012. According to the same source, the differences between the countries in Q1 2011 were rather marginal. The smartphone penetrations were around 30% in all of the benchmarked countries except for Italy, Germany and Austria in 2011. The change within the next 12 months suggests that the some of the countries have had tremendously strong smartphone sales and migration in 2011.

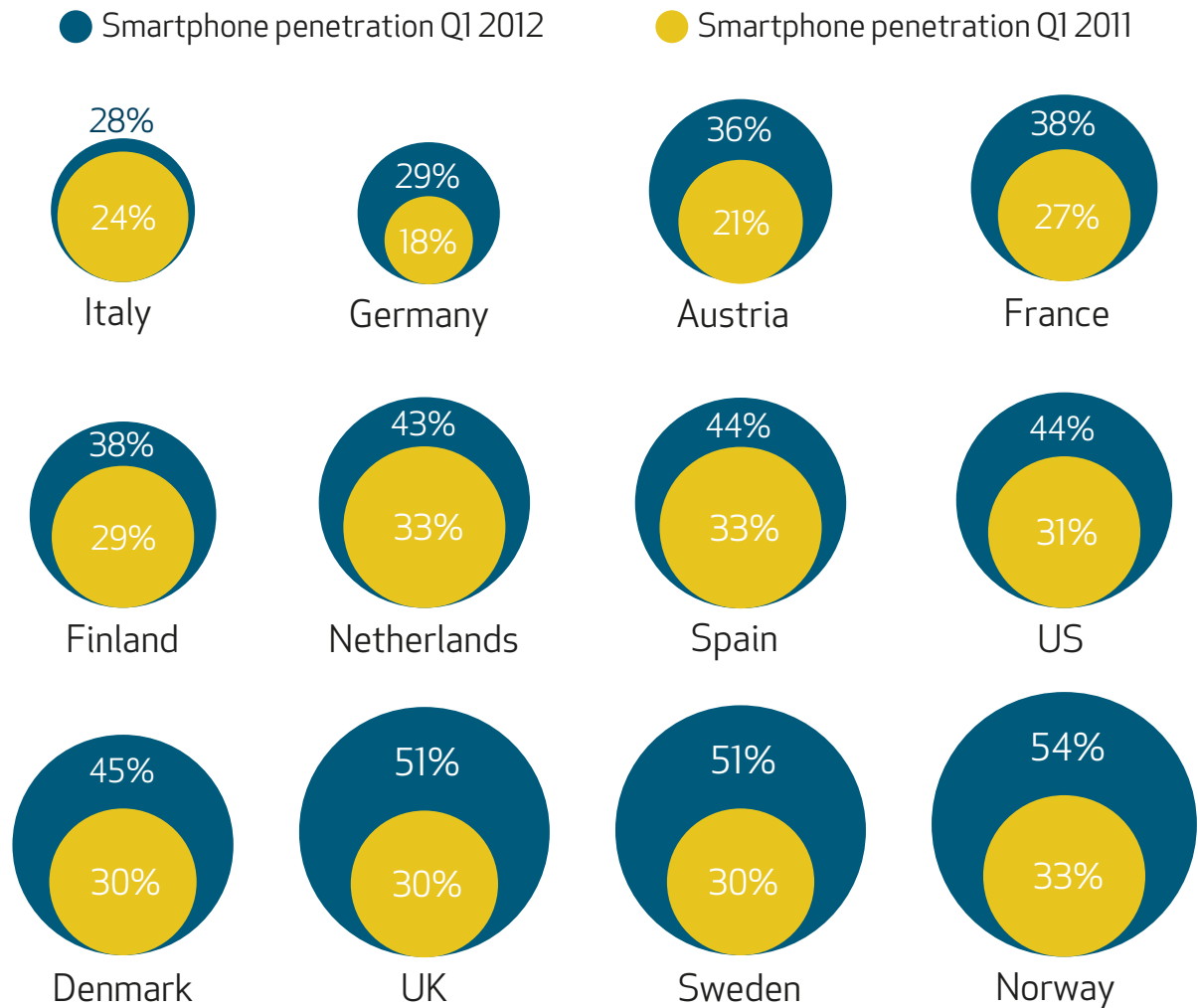
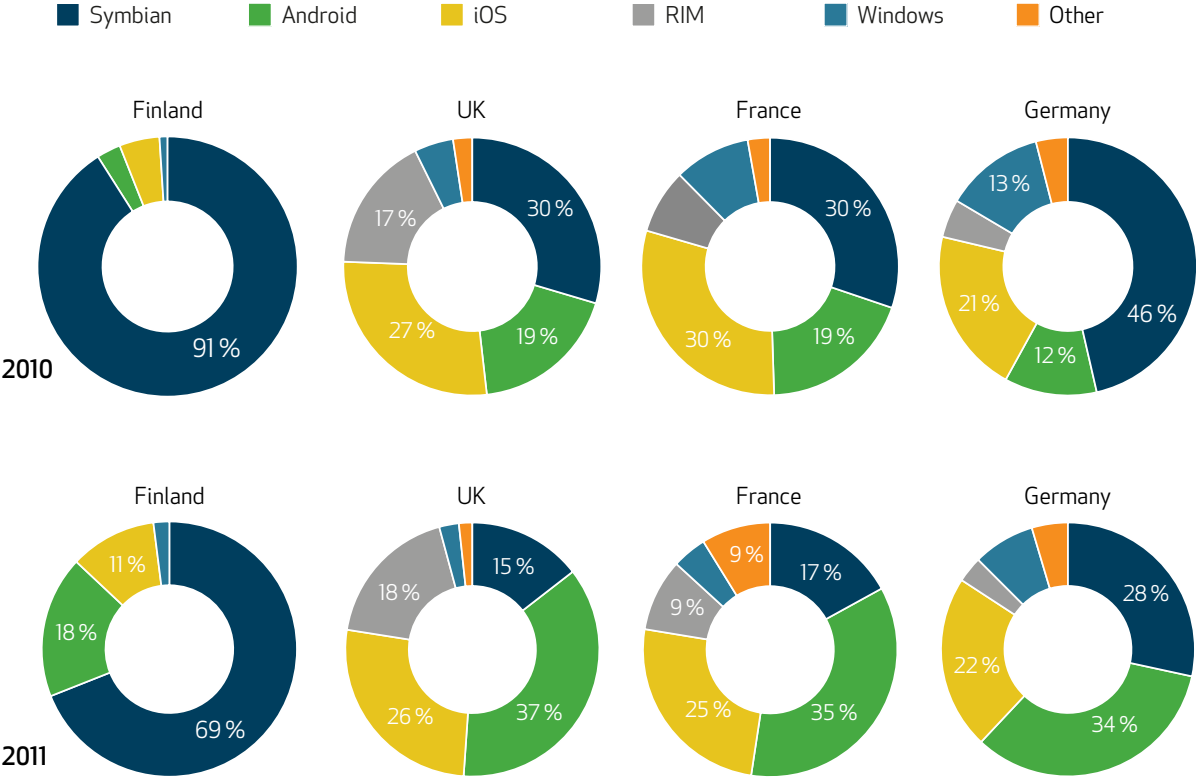


Figure 7 | Smartphone penetration in selected countries

Source: Interview study commissioned and published by Google in Q1 2012, based on 1000 interviews in each country. Data visualization by Idean.

Rapidly changing device base



There are also other differences in the structure of the smartphone base. Nokia, and in particular Symbian has a strong market share in Finland. In the other benchmarked countries, the smartphone base is less populated by Symbian and higher numbered by Android, iOS and RIM, as illustrated in the figure 8. Idean estimates that Finland is an exception within Western European countries with it's high share of Symbian devices.

Figure 8 | Installed base of smartphones by OS in selected countries in 2010 and 2011.
Source: Finland's statistics by Idean, 2012; other countries by ComScore, 2012.

MOBILE APPLICATIONS MARKET IN FINLAND

●	Mobile applications market in Finland	16
●	Top applications in Finland	17
●	Application store revenue	22
●	Examples of application downloads	24
●	Average number of applications in different countries	27

Mobile applications market in Finland

The combined mobile applications market value in Finland was four million euros in 2011, including revenue from Apple's App Store for iPhone and iPad, Google Play, Nokia Store and Windows Phone 7 Marketplace. Apple's App Store was the largest in revenue among the viewed ones, with approximately 57% share of the total revenue in 2011. Application stores' revenues are predominantly global, since only a minority of the top 100 application publishers are Finnish. Games was the most popular application category within all of the viewed application stores.

Downloadable mobile applications, which are often called mobile apps, have become popular among mobile users and mobile content providers. One could say that mobile applications and advanced smartphones have finally redeemed the expectations made for mobile services in the turn of the century.

Mobile applications have enabled a new level of user experience in mobile devices. The start of the mobile application business was set when Apple launched its store in the summer 2008, followed by Android Market couple of months later. In March 2012 Android Market was rebranded as Google Play. Apple's App Store launch took place in approximately a year after the original launch of the iPhone. App Store and Google Play are the two leading application stores globally. Other significant application stores are Nokia Store, Windows Marketplace, Amazon Appstore and BlackBerry App World. In Finland the most notable application stores are Apple App Store, Google Play, Nokia Store and Windows Marketplace.



Top applications in Finland

Application stores publish top charts by countries and the lists are further divided into different application category based listings. In this report Idean has looked at the overall categories that cover all application categories together. The overall category is further divided into paid and free categories, which are both looked separately. The lists in this report represent only one day, but they still give a good overview of the typical situation in the application stores.

The distribution of applications by the nationality of publisher reveals the global nature of the application store channel. Only a minor share of the applications downloaded in Finland are published by Finnish companies or organizations. Without Rovio and Angry Birds, the share of Finnish publishers would be even thinner, especially in the top 10 charts. Best representation of Finnish publishers is in Windows Marketplace free category, where almost a one third of the top 100 applications were by Finnish publishers.

In general, Finnish publishers are best represented in the free categories. Close to one quarter of the combined free application are published by Finns.

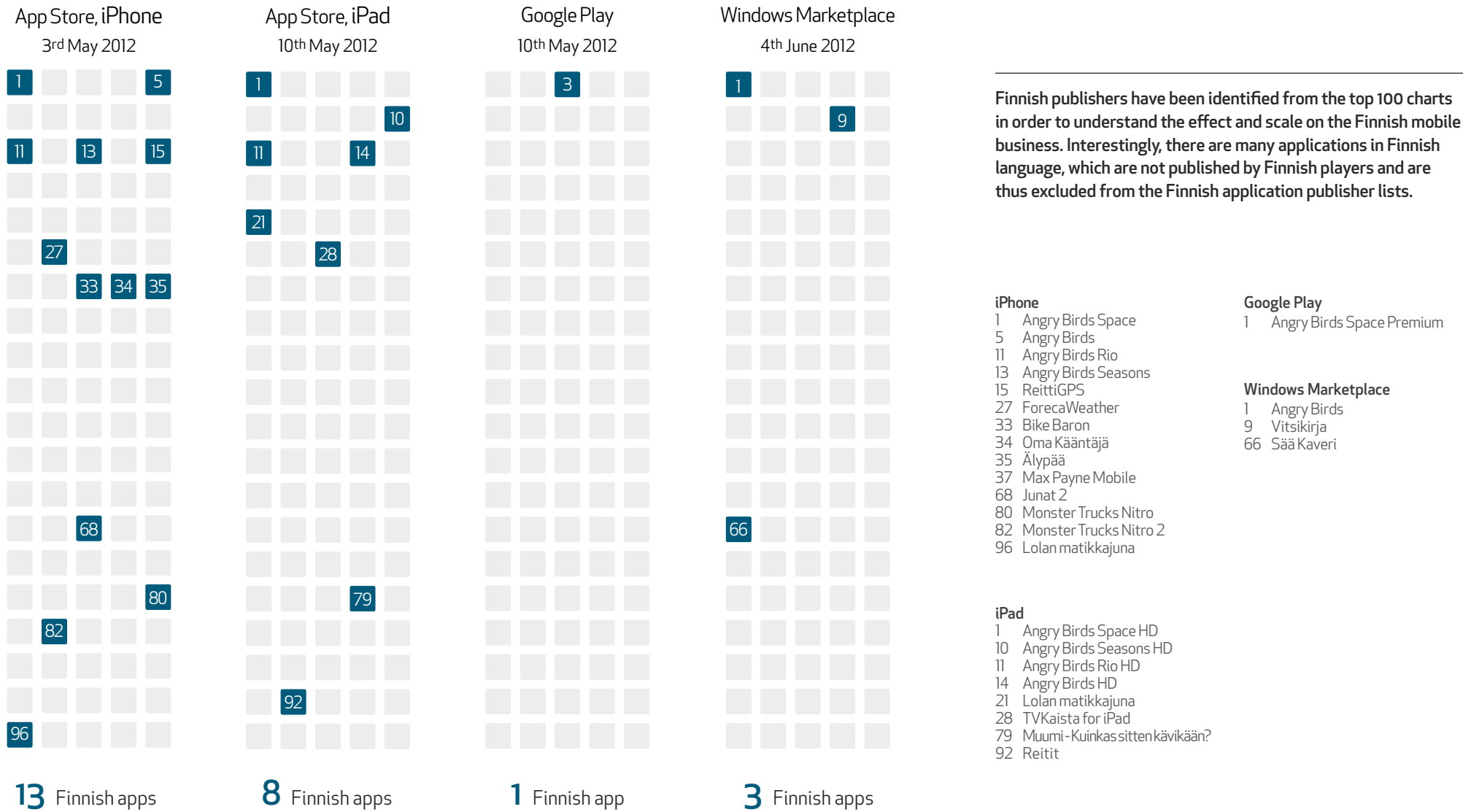
There are all together 25 Finnish paid applications among the top 100 applications in the four application stores. Ten of these paid applications are different versions of Angry Birds, which leaves 15 paid applications for the rest of the Finnish publishers. On the other hand, all top hundred lists are dominated by games, where Finns have only some representation beyond Rovio.

In the figures 11 and 12, Idean has analysed the top 100 lists by application categories. All of the categories in different platforms are covered. However, games category has several subcategories, but is viewed as one. Some of the categories are platform defined, such as "App Wallpaper", which is a Google Play specific category. Otherwise, the similar categories have been combined in the corresponding rows to allow benchmarking across platforms.

Games are the leading mobile application category in all of the reviewed platforms. They represent from 41 to 71 per cent of the paid applications and 34 to 46 per cent of the free applications in the top 100 across all platforms. Other popular categories are entertainment, music, photography, productivity, tools, utilities, news and social networking.

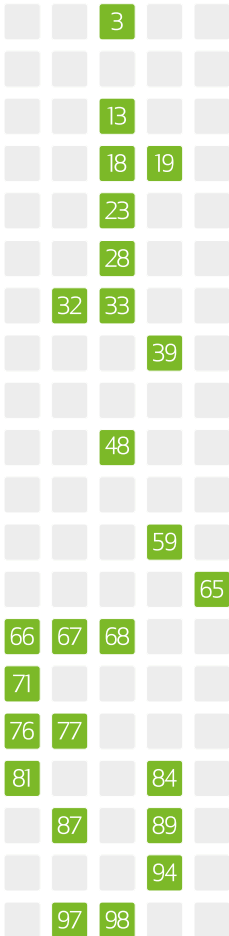


Top applications in Finland, paid



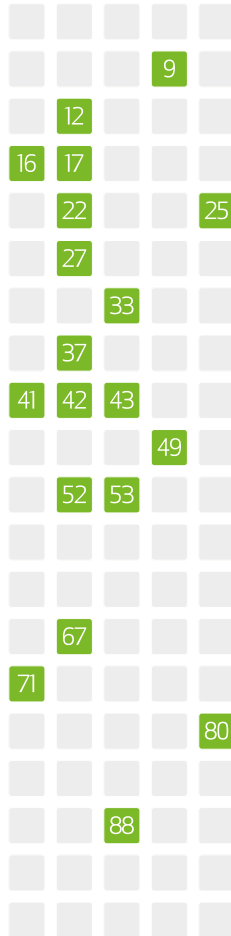
Top applications in Finland, free

App Store, iPhone 3rd May 2012



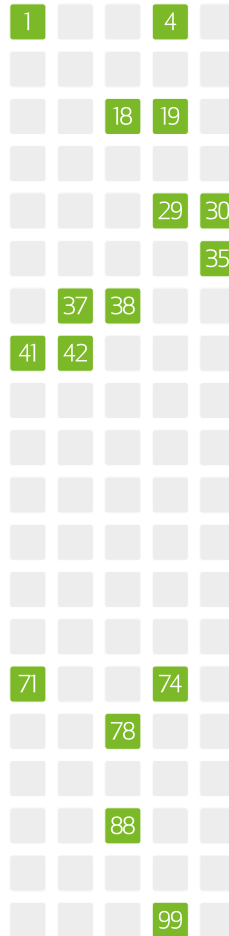
25 Finnish apps

App Store, iPad 10th May 2012



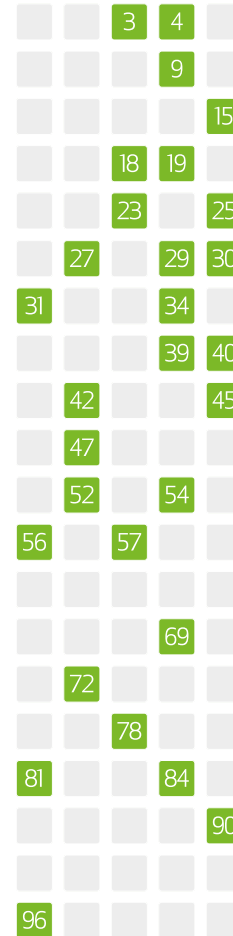
20 Finnish apps

Google Play 10th May 2012



16 Finnish apps

Windows Marketplace 4th June 2012



29 Finnish apps

iPhone

- 3 Hockey Night 2nd Screen
- 13 Reissuvihko GO
- 18 Elisa Kotikisat
- 19 Sports Tracker
- 23 Seiska
- 28 Fonecta Caller
- 32 Autorekisteri.fi
- 33 Junat kartalla
- 39 YLE Areena
- 48 Angry Birds Free
- 59 OP-mobiili
- 65 Sampo Pankin Mobiilipankki
- 66 HS.fi - Helsingin Sanomat
- 67 Nordea Finland
- 68 booxTV
- 71 Navigaattori
- 76 Ilta-Sanomat
- 77 Angry Birds Seasons Free
- 81 Macmaa
- 84 Minun Sonera
- 87 Elisa Viihde
- 89 Nettimoto
- 94 ReittiGPS Lite
- 97 tori.fi
- 98 Eat.fi - Ravintolahaku

iPad

- 9 Helsingin Sanomat
- 16 Iltasanomat for iPad
- 17 ISTV
- 22 Angry Birds HD Free
- 25 Angry Birds Rio HD Free
- 27 booxTV HD
- 33 Teknari
- 35 MTV3 Juuri nyt HD
- 37 Kauppalehti
- 41 Elisa Viihde for iPad
- 42 Angry Birds Seasons HD Free
- 43 Sampo Pankin Tabletpankki
- 49 Elisa Kirja
- 52 Ruutu
- 53 Iltalehti - Päivän lehti
- 67 Länsiväylä
- 71 Kelikamerat
- 80 OP-Pohjola
- 88 Telkussa

Android

- 1 Elisa Kotikisat
- 4 Angry Birds Space
- 18 Veikkaus
- 19 Angry Birds
- 29 Angry Birds Seasons
- 30 Sports Tracker
- 35 Angry Birds Rio
- 37 Fonecta Caller
- 38 ForecaWeather
- 41 Sanakirja.org
- 42 YLE Areena
- 71 Ruutu
- 74 OP-mobiili
- 78 Iltalehti - Päivän lehti
- 88 Sonera Navigaattori
- 99 Elisa Viihde

Windows

- 3 Fonecta Caller
- 4 Ilta-Sanomat
- 9 MTV3 Juuri nyt
- 15 Kotikokki.net
- 18 Premium Pool
- 19 Veikkaus
- 23 NRJ Finland
- 25 Yleisradio
- 27 Elisa Viihde
- 29 Weather
- 30 Telkussa nyt
- 31 Teksti-TV
- 34 Polttoaine
- 39 Mobiilikortti
- 40 Ampparit.com Reader
- 42 Junat kartalla
- 45 Elisa Kotikisat
- 47 Kelikamerat
- 52 Suomi Teksti-TV
- 54 ajanotto
- 56 Mobiilipankki
- 58 Junahaku
- 69 Telkku
- 72 Hockey Night 2nd Screen
- 78 Taksifinland
- 81 Viiniopas
- 84 Televisiossa nyt
- 90 Sports Tracker
- 96 Minun Sonera

Figure 10 | Finnish free applications in Top 100 by platform.

Source: iTunes, www.AppAnnie.com, www.windowssphone.com, Idean, 2012.

Top applications in Finland, paid

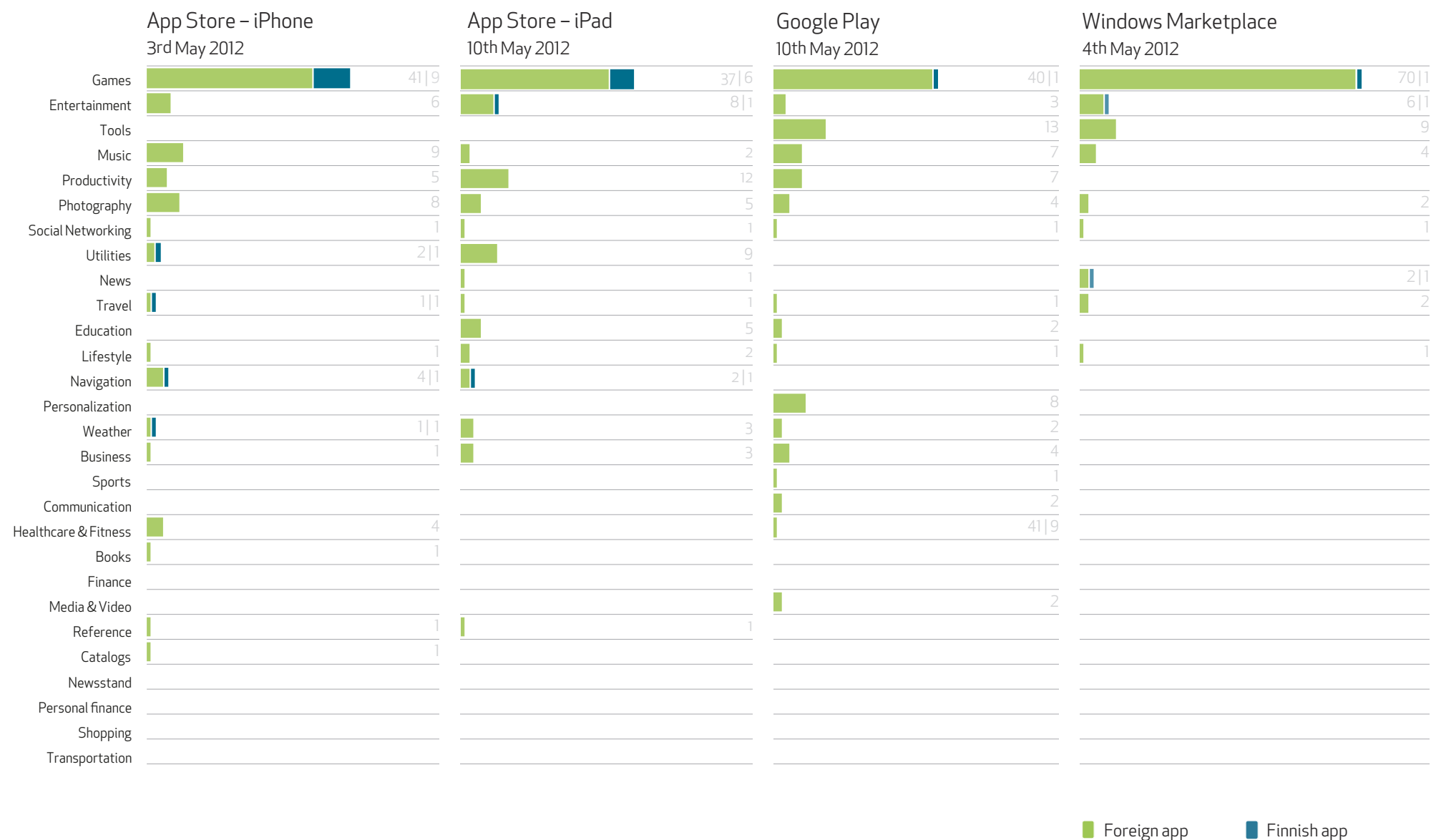


Figure 11 | Top 100 paid applications in Finland – distribution by category.
Source: iTunes, www.AppAnnie.com, www.windowsphone.com, Idean, 2012.

Top applications in Finland, free

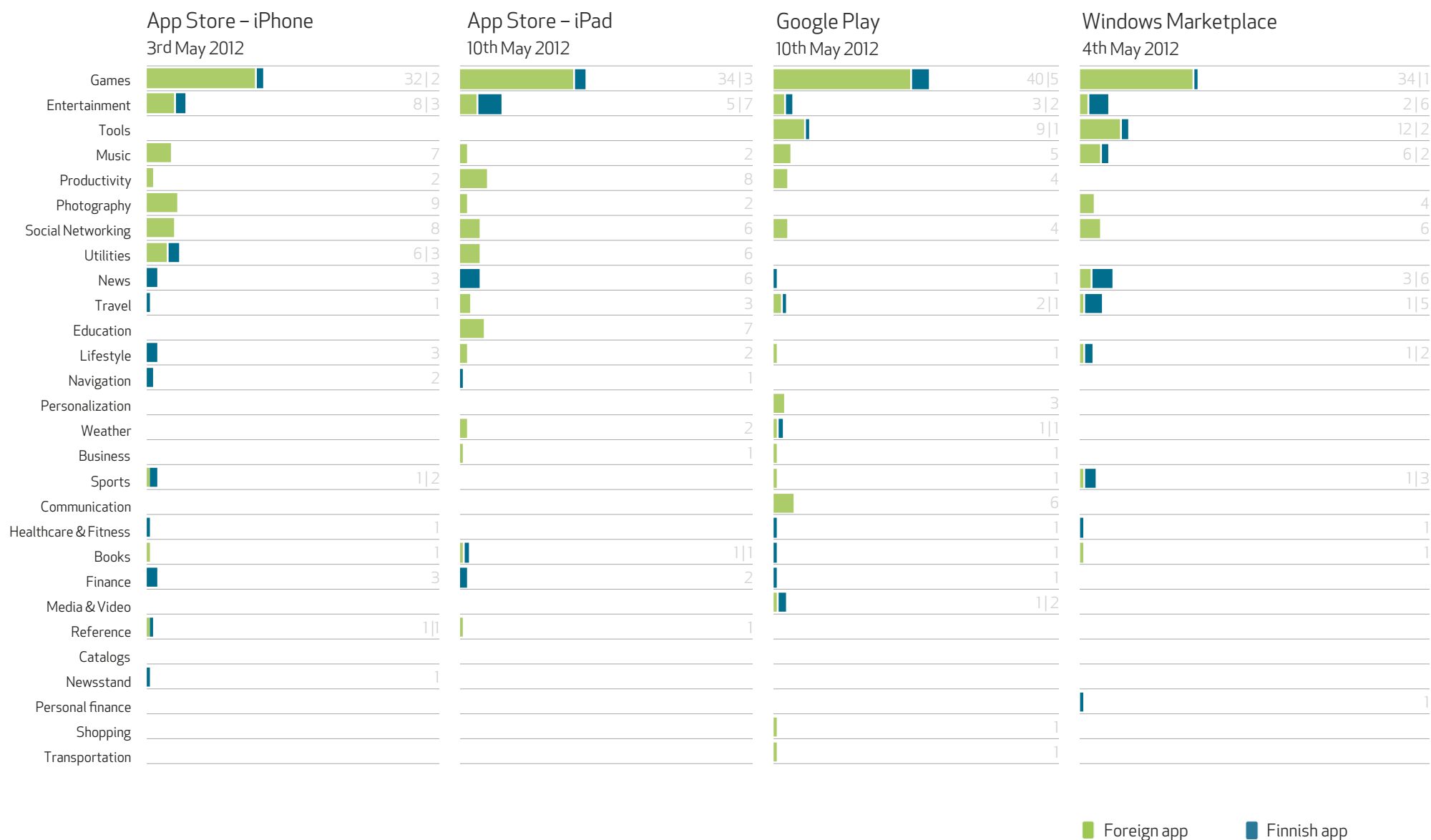


Figure 12 | Top 100 free applications in Finland – distribution by category.
Source: iTunes, www.AppAnnie.com, www.windowsphone.com, Idean, 2012.

Application store revenue

Total consumer spending in application stores in Finland 2011 was approximately four million euros, which represents a 152% growth over the previous year. The growth was due to increased smartphone user base as well as greater supply of applications. There is also a growing amount of Finnish applications available, which has been followed by an increasing marketing activity related to them.

In 2012 the market value is expected to grow to approximately 10 million euros, which is more than a double compared to the previous year. In the following years the growth rate is forecast to mild down despite the ongoing growth of smartphone base. The future smartphone user base growth comes from less active mobile service user segments as the most active early adopters have already smartphones. Moreover, many of the major content players are expected to introduce services based on alternative billing mechanisms for application stores. For example browser-based services, where service providers can choose between a large selection of different billing methods. In 2015 the total application store revenue is forecast to be approximately 20 million euros.

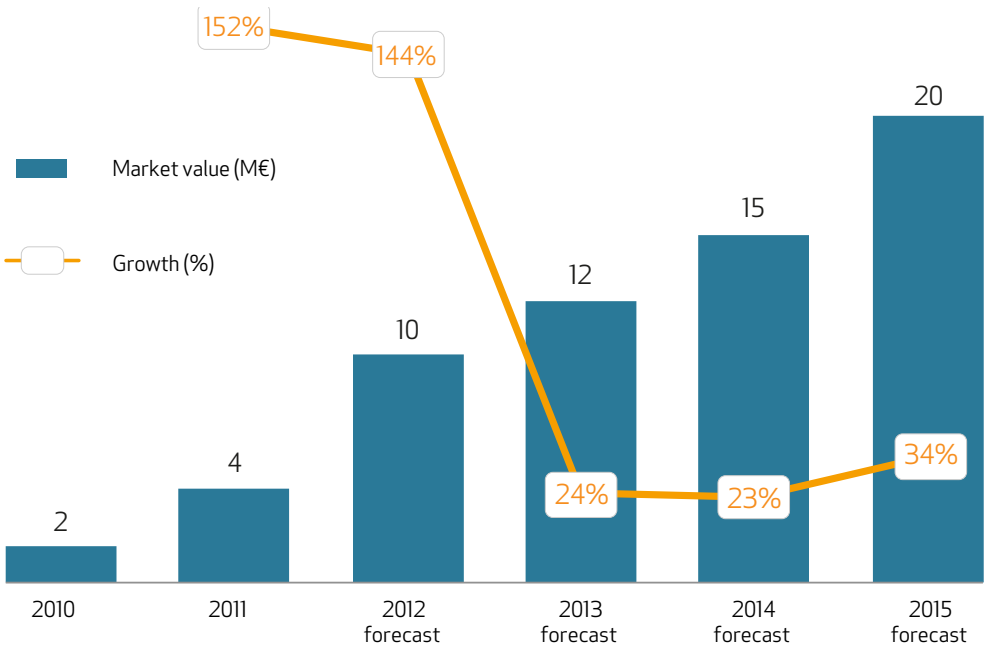


Figure 13 | Total application store revenue in Finland 2010-2015 (M€)
Source: Idean, 2012.

Application store revenue

Apple’s App Store is the largest application store throughout the viewed period in Finland, when considering the combined iPhone and iPad revenue. In 2011 the Apple App Store represented 57% of the total application store revenue. Windows Marketplace is forecast to show the fastest growth in the coming years and to become a challenger for Apple’s ecosystem in Finland.

Google’s application store has yet failed to generate considerable revenue. The growth will be further hampered by the slowing user base growth. Moreover, major application publishers in Finland will increasingly turn their focus towards the growing Windows smartphone base and the lucrative Apple ecosystem.

Apple has paid out to its App Store developers

4 billion dollars

between the launch of App Store in July 2008 and March 2012

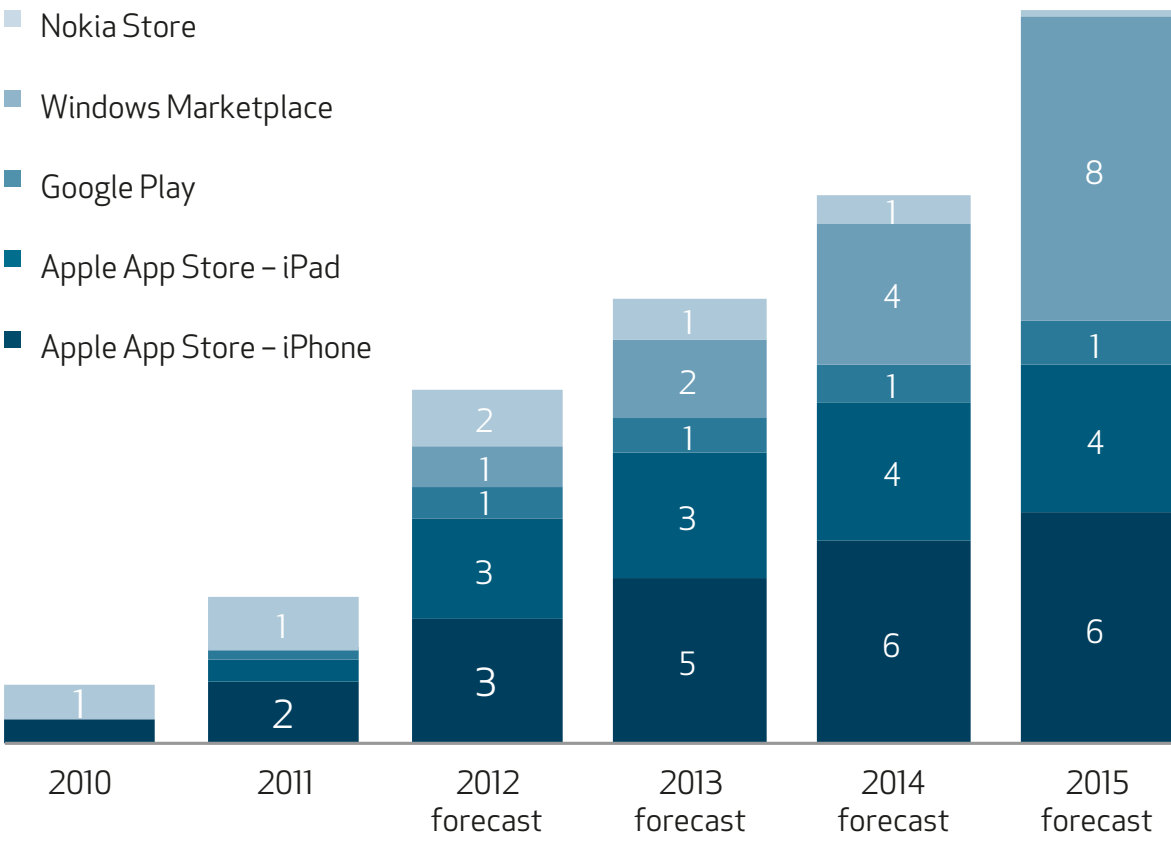


Figure 14 | Application store revenue by platform in Finland 2010-2015 (M€) Source: Idean, 2012.

Examples of application downloads

There is no public statistics regarding application downloads except for some sporadic news releases by individual service providers. A collection of download figures is presented in the figure 15 based on the news releases. The figure visualizes the download numbers in the given timeframe. All of the reviewed applications were free of charge and thus indicate the download potential for free apps in Finland. Corresponding figures for paid applications would be considerably lower.

Idean has estimated average download figures for the overall category by different platforms in the spring 2012. The estimates are based on publicly available material as well as undisclosed material provided by service providers for the analysis. The top ranked free application for iPhone, Android and Symbian generate between 1000 and 2000 downloads per day in Finland. Windows downloads are somewhat lesser, but they are picking up as the device base picks up rapidly. iPad application downloads are approximately half of the leading smartphone platforms.

The number 10 ranked free applications generate approximately 300 iPhone, Android and Symbian downloads. The number 50 application brings close to 100 downloads and the number 100 application approximately 15 downloads. The download figures for paid applications generate between 10-15% of the corresponding free downloads.

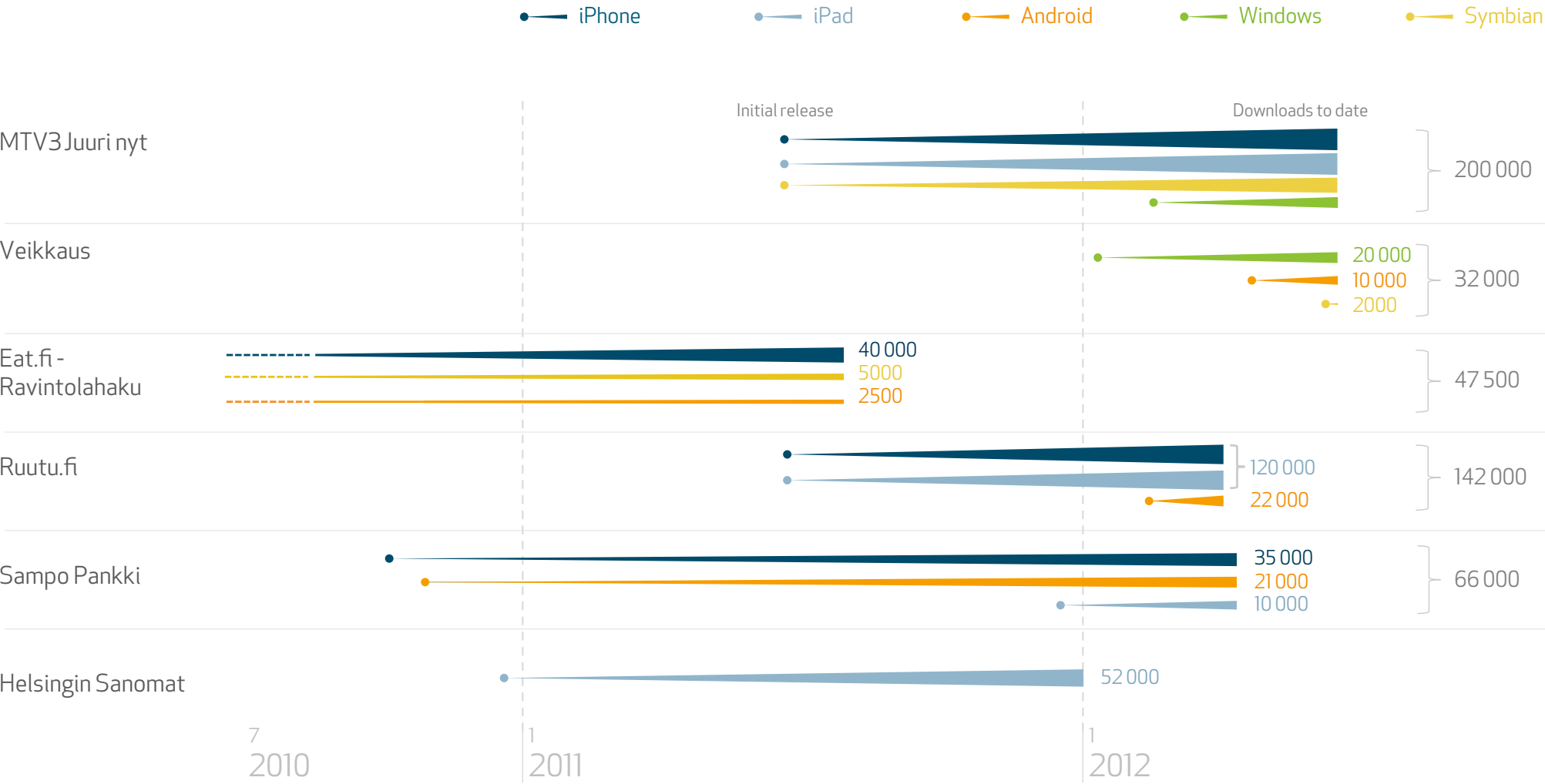
In June 2012 MTV Media informed that its “MTV3

Juuri nyt” application had been downloaded 200 000 times since the initial release 12 months earlier. The application has been released for various platforms, including iOS, Meego, Symbian and Windows. Details regarding the download split between platforms were not revealed.

Veikkaus released download figures in June 2012. According to the news release, the Windows Phone application, which was launched in January 2012, had gained close to 20 0000 users in about five months. Android application had attracted some 10 000 downloads since its launch in April 2012 and Symbian application close to 2000 in a matter of couple of days. Additionally Veikkaus informed in May 2012 that the combined number of application downloads was 70 000, including its applications for iPhone, Android and Nokia devices. This suggest that there were at least 40 000 downloads for iPhone by June 2012. The Veikkaus iPhone application was removed from App Store in April and is not included in the graph above.

Examples of application downloads

Figure 15 | Examples of published application download figures
Sources: Service providers, Idean, 2012



Examples of application downloads

In July 2011 Eat.fi, an online restaurant guide, informed that its iPhone application had been downloaded 40 000 times and it has some 9000 weekly users. The application has been released also for Symbian and Android devices, with 5000 and 2500 downloads respectively up to July 2011.

Nelonen Media shared download information regarding Ruutu.fi application in March 2012. Its iPhone and iPad versions had gathered together approximately 120 000 downloads since their release in June 2011. Additionally Android application had been gained 22 000 downloads in the first 1,5 months since its release.

HS iPad application was downloaded 52 000 times by the end of 2011 and has some 20 000 unique active users per month according to the company. The initial launch of the application was in December 2010.

Sampo Pankki informed in March 2012 that a total of 56 000 users have downloaded its mobile banking application, with a split of 62% and 38% between iPhone and Android downloads. Additionally the iPad application had attracted 10 000 downloads in three months after initial launch. Sampo has boosted its mobile services uptake with rather noticeable marketing efforts.



Average number of applications in different countries

The figure 16 illustrates the installed base of mobile applications and usage in smartphones in selected countries. The data is provided by Google and it is based on smartphone user interviews in different countries. There were approximately 1000 interviews carried out in each country. Smartphone users were asked how many applications they currently have in their mobile, how many of them are paid and how many applications have they used in the past 30 days.

Finns have the least number of installed application and applications used among the benchmarked countries. On average, there were 17 applications installed per a smartphone in Finland, of which three were paid applications. A total of six applications were used within the past 30 days. These numbers are rather modest compared to other Nordic countries. For example in Sweden, the corresponding figures were approximately double in each of the viewed metrics.

There might be several explanations for this. Perhaps the most significant explanation is the difference in smartphone base. Nokia and Symbian are still dominating the Finnish smartphone base

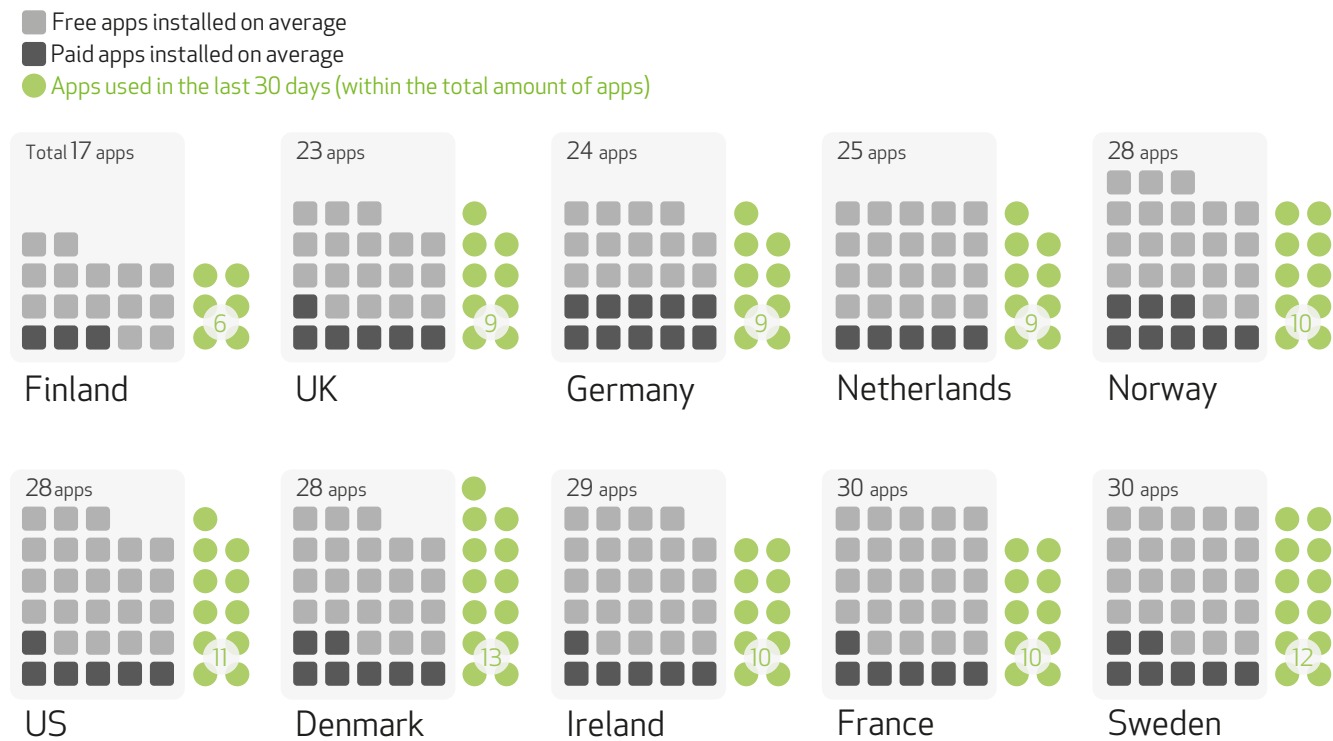




Figure 16 | Installed base of mobile applications and applications usage on smartphones in selected countries Q1 2012
Source: Google, 2012. Data visualization by Idean.

and Symbian users are in average less active in application downloading. There are fewer applications available for Symbian devices and the market place has not become as popular as the ones for iPhones and Androids. Another reason might

be the relatively small number of local applications and less active marketing efforts related to them in Finland. Moreover, the differences could have been smaller if the focus of the study would had been exclusively on iOS, Android and Windows devices.

PREMIUM SMS SERVICES & PREMIUM RATE CALLS

	Premium SMS services	29
	Premium rate calls	31

Premium SMS services

Against the general expectations, the market value for premium SMS services has not dropped during the last couple of years. In fact, it has remained rather stabile and even showed a mild growth. In 2011 the total market value was 70 million euros, which is one per cent up from the previous year. In the coming years the SMS revenue is forecast to decline as some of the most lucrative SMS service usage migrate to application and browser based services.

There are sharp variances in business dynamics between different premium SMS services. The market includes some service categories that continue to grow, although most of the categories are facing negative demand expectations. All in all, there is currently a lack of major new services that would drive the market growth. Moreover, the major service providers' current development focus is on mobile applications and browser based services, not in SMS based services. Thus there are no expectations for notable new premium SMS services in sight.

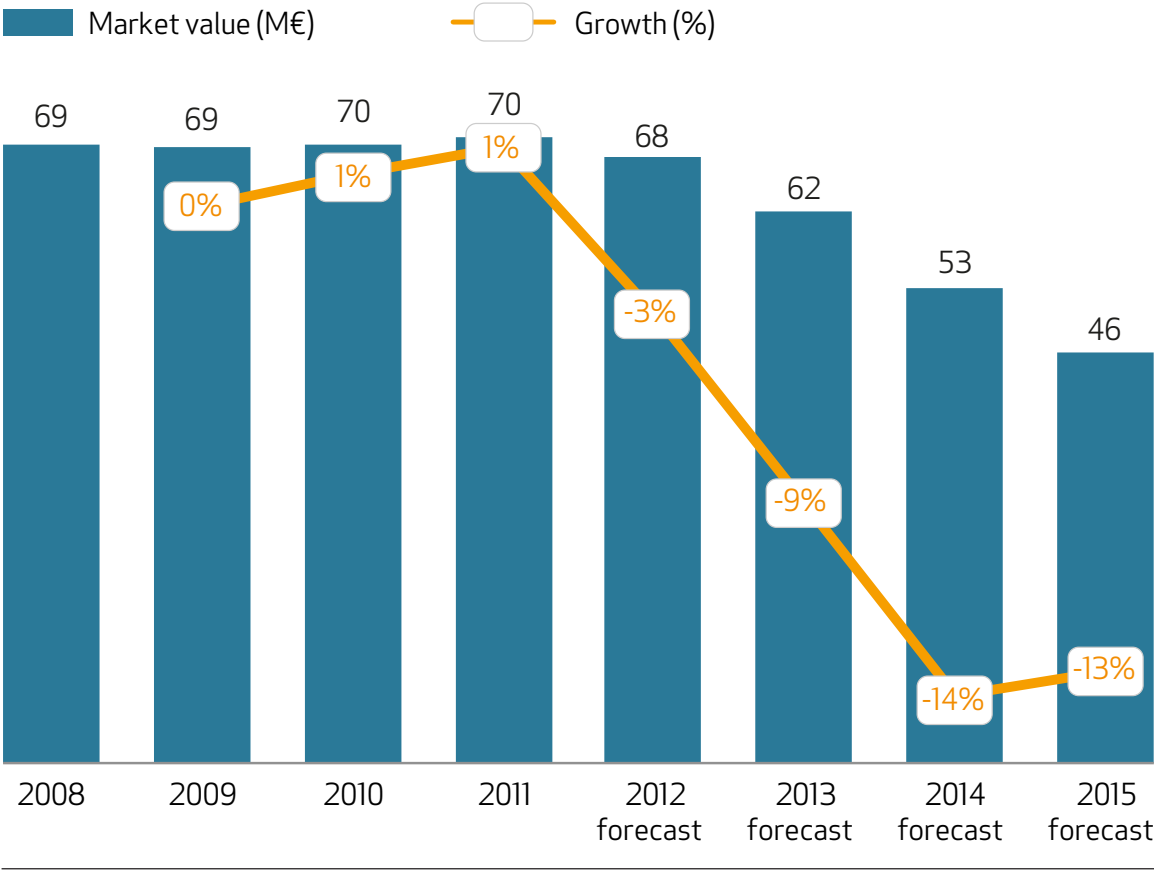


Figure 17 | Total premium SMS services revenue in Finland 2010-2015 (M€).

Source: Idean, 2012.

Premium SMS services

The revenue for most of the major SMS service categories remained stable in 2011 against 2010. In fact, the usage of many services was declining, but the price increases compensated the drop in transactions. Services that were growing and impacted the total market revenue in 2011 include mobile quiz, social media, classifieds and charity. Services that had a contrary effect and declined include ringtones, directory services, games and SMS loans.

The overall demand continue to favor information services compared to entertainment services. Share of information services was approximately 70% of the total premium SMS revenue in 2011, up from 66% in 2010.

The market for mobile content is dominated by a few large players and followed by dozens of other service providers. The operator’s role is mainly in the delivery and billing services, less in service provision. Fonecta continued as the largest service provider by revenue in 2011, followed by HSL and MTV Media. Together these three players represented close to a half of the total market revenue. Major part of the remaining revenue is going trough aggregators that host a number of services providers. Previously mobile entertainment players, such as Zed, Aspiro and Jamba, were among the largest market players. Today their share has dropped significantly and some of them have ceased to operate in Finland.

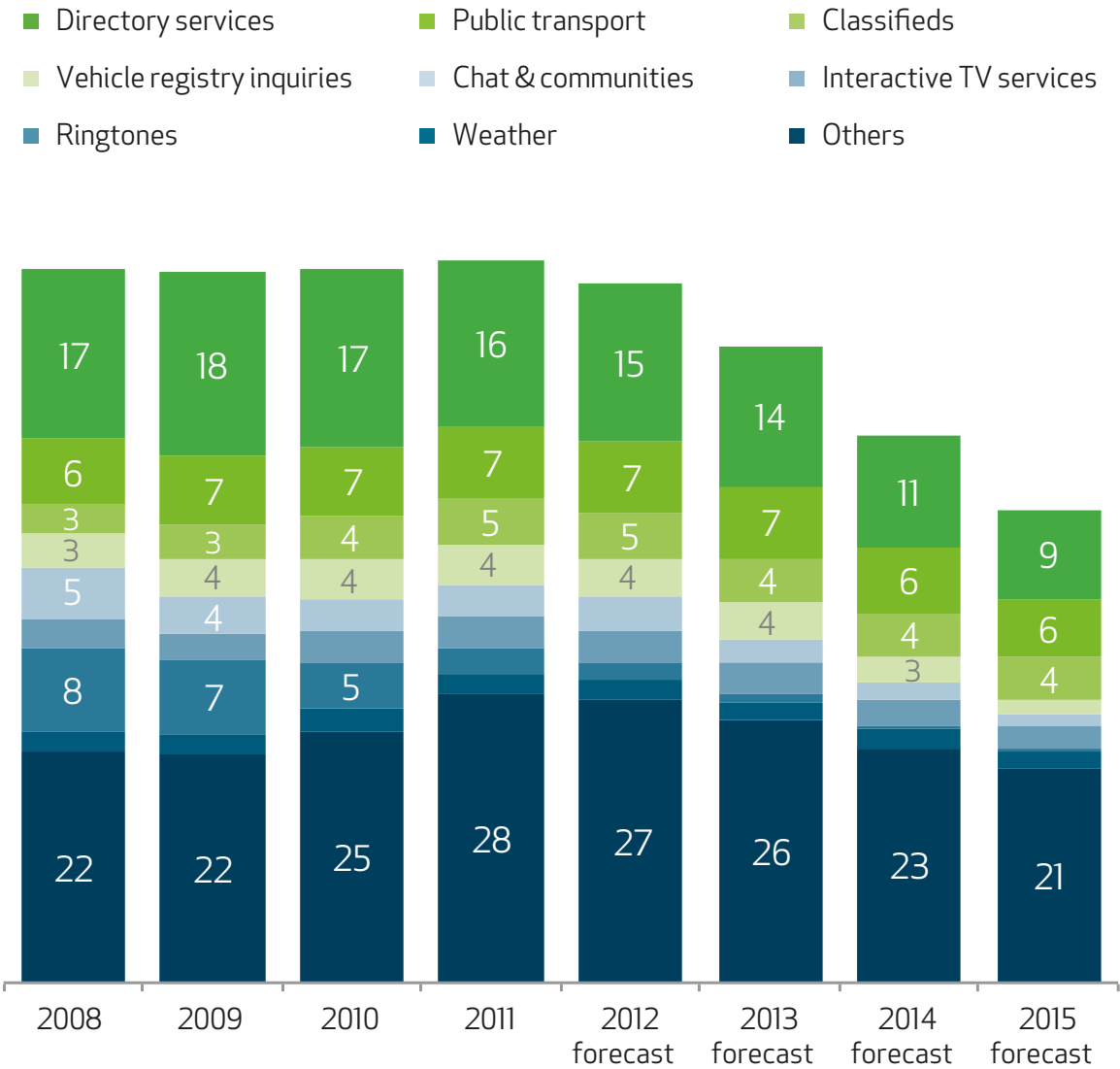


Figure 18 | Premium SMS revenue by major service category in Finland 2008-2015 (M€). Source: Idean, 2012.

Premium rate calls

The market for premium rate calls has a long and successful history, which has been unfairly overshadowed by the more hyped markets, such as SMS based and mobile application market. Premium rate calls represented two thirds of the total mobile services revenue in 2011 and the total revenue was approximately 170 million euros. The total revenue trend has been slowly decreasing, but the fall is forecast to accelerate towards the end of the forecasted period of 2012-2015. Directory services were the leading service category and represented a good half of the total market revenue in 2011.

The market for premium rate call emerged in the early 1990's, which is well before the start of SMS based business. It has flourished for close to two decades and was not hampered by the success of SMS based services in the first decade of the new millennium. The reason for premium rate calls success is probably in its ease of use and familiarity among consumers. There are no complicated logins or passwords needed for executing a payment and majority of mobile users are familiar with the concept of premium rate calls.

The total market revenue is highly dependent on the success of a couple of major services, such as directory services and taxi orders. Their revenue is forecast to decline in the coming years and the total market revenue trend will follow. In 2015 the total market value is forecast to be 130 million euros, which will still represent almost 60% of the total mobile services revenue.

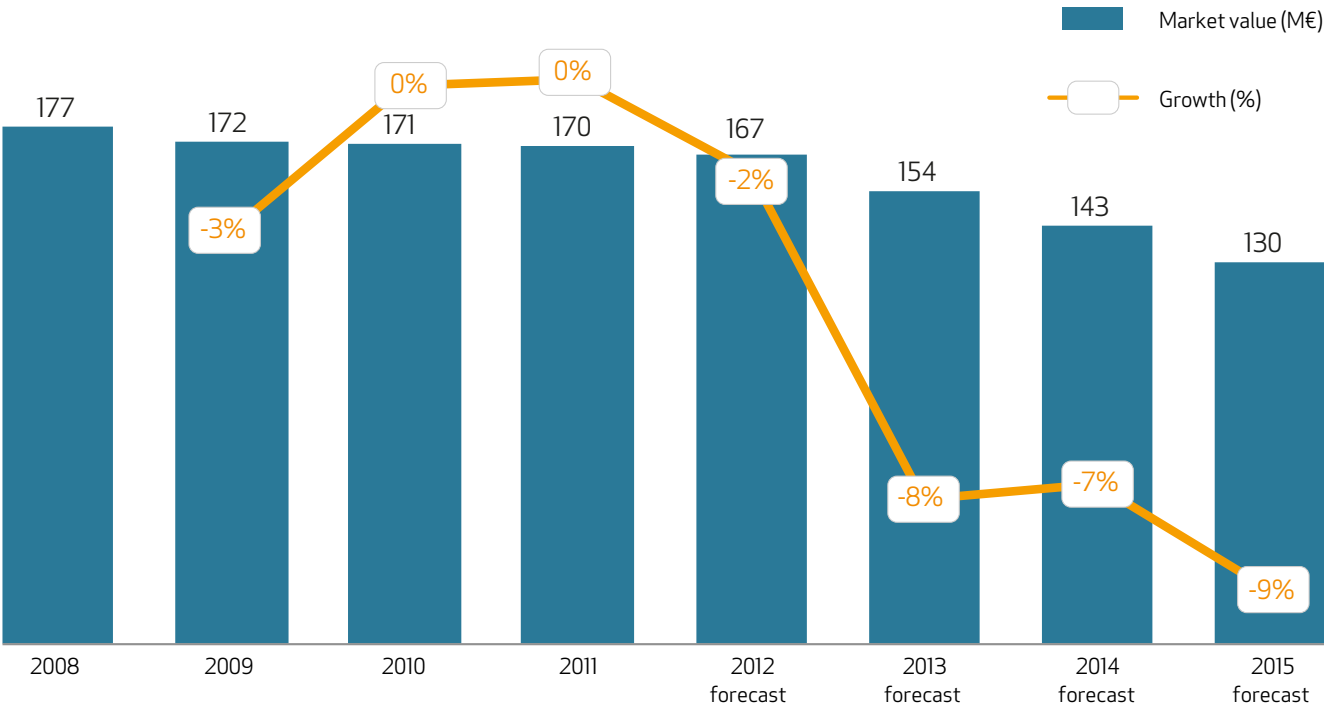


Figure 19 | Premium rate call revenue in Finland 2010-2015 (M€).
Source: Idean, 2012.

Premium rate calls

The market consists of variety of services from directory services to taxi orders, TV show voting, horoscopes and mobile payments. The revenues are rather unevenly split between services as the two leading services represented together approximately three quarters of the total revenue in 2011. Demand for directory services has decreased slowly over the years and thus also the revenue despite some price increases. The drop is forecast to accelerate in the following years as the uptake of corresponding application and browser based services grows and new forms of similar services develop. It is also likely that taxi order revenue is showing some gradual decline as new ways of taxi ordering develop.

Majority of the premium rate call service categories are forecast to decline in the coming years with some exceptions. For example mobile payment revenue has risen over the last couple of years and is forecast to grow in the coming years. This is especially driven by soft drink and snack vending machines, which have increasingly often premium rate calls as a payment method.

The list of service providers in the market is long. Fonecta, Eniro, MTVMedia, YLE and Lippupiste are among the major ones. Fonecta is the clear market leader followed by Eniro. Rest of the market is more evenly split between a number of players.

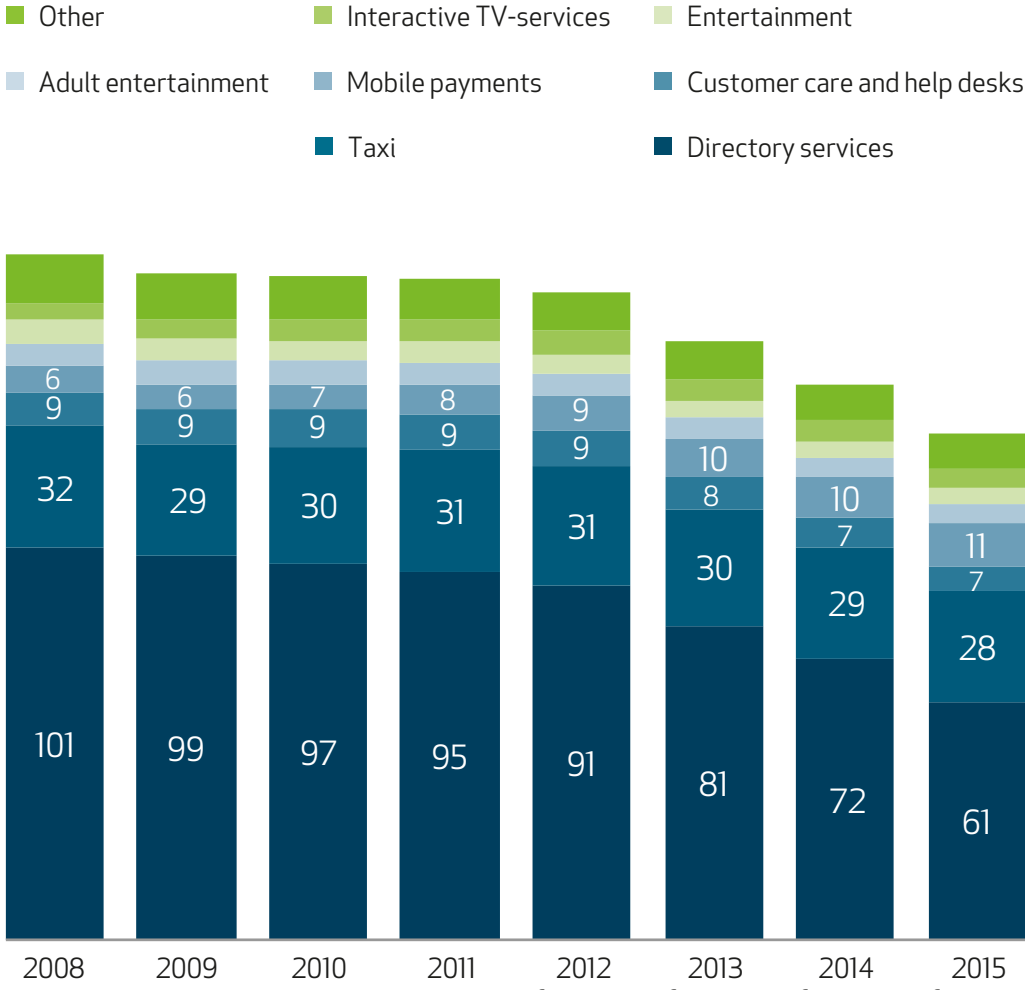


Figure 20 | Premium rate call revenue by major service category in Finland 2010-2015 (M€).
Source: Idean, 2012.

MOBILE MARKETING

Mobile marketing

Mobile marketing is growing steadily. In 2011 the total marketing spending was 14 million euros, which is 10% more than in the previous year. SMS based forms of mobile marketing bring majority of the revenue today, but display and search marketing are forecast to show strongest growth in the future. The total mobile marketing spending is forecast to reach 25 million euros in 2015. Customer relationship communications is the largest category among mobile marketing. Currently its share is over 60% and in 2015 it is still forecast to represent over 40% of total mobile marketing spending.

In this report, mobile marketing has been divided into mobile advertising and customer relationship communication. Mobile advertising is further divided into display, search and messaging advertising. Customer relationship communication consists of diverse information messages from companies and authorities to consumers or other interest groups. For example, SMS notifications regarding a packet delivery or library book reservation are customer relationship communication. In many cases there is a thin line between mobile advertising and customer relationship communication.

Mobile display advertising includes any display advertising viewed or read on a mobile phone including rich media advertising. This could be browser based as well as in-app. Mobile search consists of advertising appearing on specific word requests on search engines, viewed on a mobile device. Mobile messaging includes mainly of advertising through SMS marketing permit based databases.

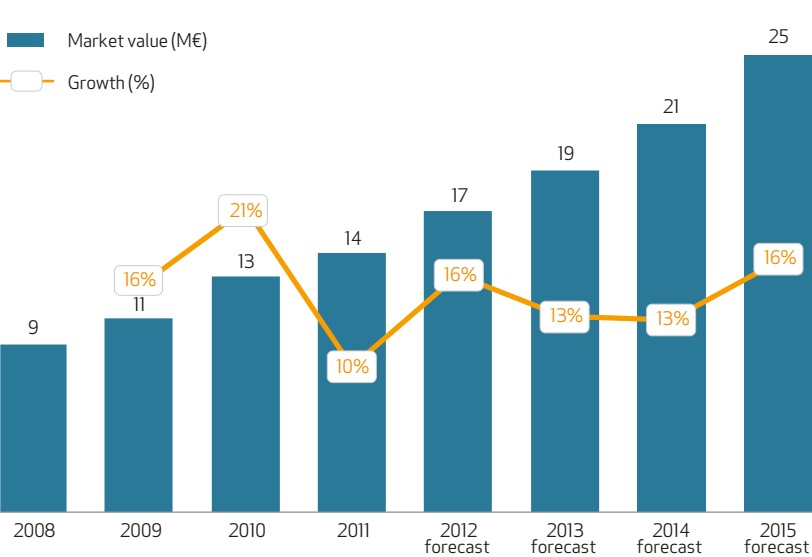
Other forms of mobile advertising are estimated to have low significance today and are thus excluded from the scope. Forecasting these markets would be too speculative at this stage. On the other hand, their significance may rise rapidly and they may increase the mobile marketing market value considerably in the coming years. The list of other mobile advertising forms is long, including mobile marketing via MMS, Bluetooth, infrared and marketing within games and video clips. Also mobile loyalty cards, mobile coupons and QR Codes are excluded.

The total mobile marketing revenue is showing healthy growth over the next few years. The increasing spending on display advertising predominantly generates the growth. Until the rise of mobile sites and applications, the mobile marketing space was ruled by SMS based marketing. The total mobile marketing represented approximately 6% of the total internet advertising in 2011 in Finland. The mobile marketing growth is forecast to outpace the internet advertising growth in the coming years and the share of mobile marketing is expected to grow.

Mobile marketing

All the viewed forms of mobile marketing are forecast to grow in the coming years except for messaging. The growth of mobile marketing reflects the changing device base as the new forms of advertising show strongest growth. The rise of modern smartphones, such as iPhone and Android devices, has enabled the fast growth for mobile browsing and application usage. Consequently there are several mobile content players that have attracted significant mobile browser audiences. Currently the leading mobile sites in Finland are visited weekly by approximately half million different mobile browsers, including both smartphones and tablet device users. The fastest growing segment, display advertising, is forecast to grow from 1 million to 10 million euros

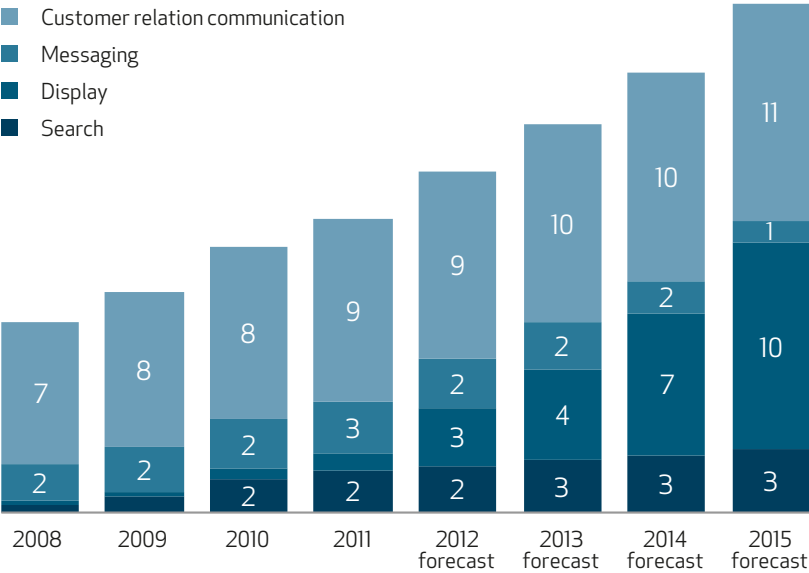
Figure 21 | Mobile marketing revenue in Finland 2008-2015 (M€).
Source: Idean, 2012.



in 2015. To put this in perspective, the internet display advertising was approximately 86 million euros in 2011.

Customer relationship communication has been the driver for the total mobile marketing growth in the past years. Majority of the potential large corporations and public organizations have adopted customer relationship communications today. According to service providers there is still some growth potential within these segments if corporations and authorities widen the utilization of the services. However, the biggest opportunity is in the SMB segment where the current uptake of the service is relatively low.

Figure 22 | Mobile marketing revenue by category in Finland 2008-2015 (M€).
Source: Idean, 2012.



MOBILE
DEVICE
BASE

Mobile device base

Mobile device base has a strong influence in the mobile content service uptake and development. Currently the most interesting and important information is the installed base smartphones, since many of the new services are targeted on this segment. Also tablet devices are in the center of attention. The total installed base of smartphones in Finland was approximately 2,6 million and represented 37% of the total mobile device base of 7 million. The tablet device sales boomed in 2011 and the total installed base was approximately 150 000 tablets in the end of 2011. The growth of smartphones and tablet devices is expected to remain strong in the near future.

The mobile phone base is divided into smartphones and feature phones, and further by operating system in this analysis. The aim is to give a reader an understanding of the potential user base for different mobile phone platforms in smartphones and tablet devices.

The mobile device figures presented in this report relate to the total mobile phone base in Finland, not the subscriber or mobile user base. The number of mobile handsets identified in the Finnish mobile networks was approximately 7 million in the fall 2011, metered by Aalto University MoMIE project. In comparison, there were approximately nine million mobile subscriptions in Finland the in end of 2011 according to Finnish Communications Regulatory Authority. The number includes mobile data subscriptions in addition to the mobile phone subscriptions. In other words, there were over 1,5 subscriptions per Finnish inhabitant. The mobile

phone user base is approximately five million if we exclude children under five years old and others not having a mobile phone.

Historically Finland is known for having a strong smartphone base. The smartphones have represented at least one fifth of the total installed base since 2008. Recently the smartphone base has picked up in other countries and Finland is not an exception any more.

The installed base is still led by feature phones, which represented almost two thirds of the total mobile phone base in the end of 2011. This is about to change as a growing majority of the mobile phone sales consists of smartphones. The installed base of smartphones is forecast to outnumber feature phones in the beginning of 2013. The smartphones are forecast to represent over two thirds of the total installed base by the end of 2015.

Mobile device base

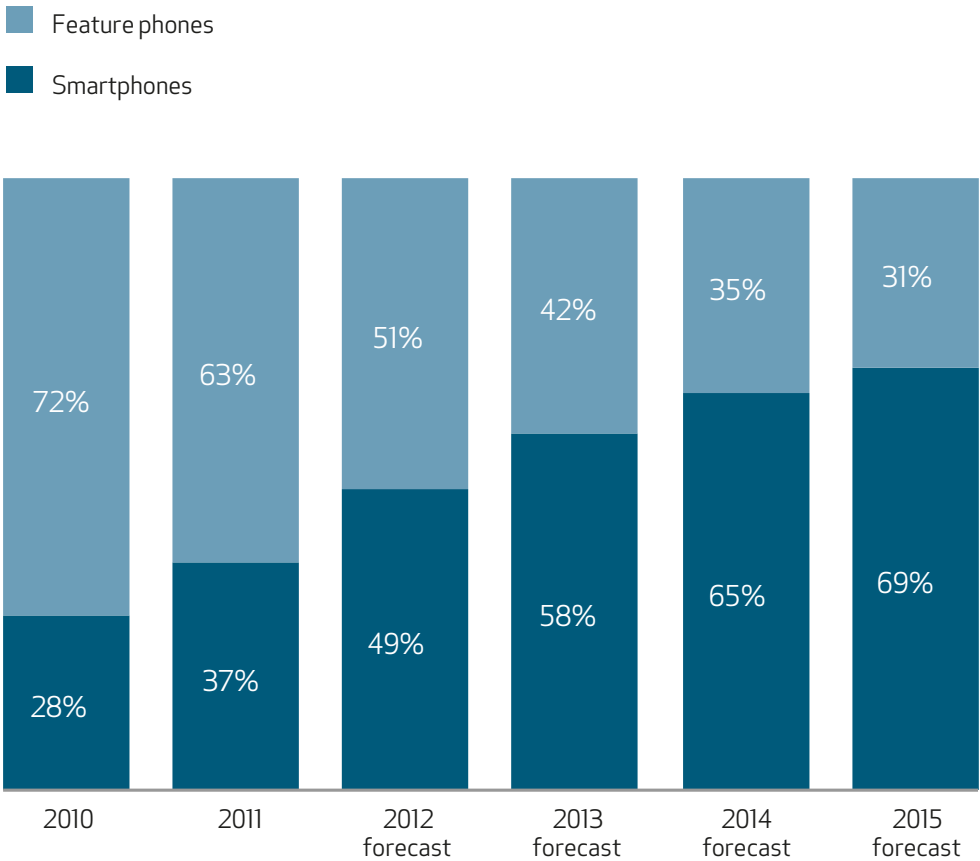


Figure 23 | Share of feature phones and smartphones in Finland 2010-2015 (as a % of the total installed base).
Source: Idean, 2012

The handset population in Finland is very fragmented and there were hundreds of different handset models identified in the Finnish mobile networks in 2011. The fragmentation of the mobile device population was increasing until 2008, but has stabilized since then. Yet in international comparison the Finnish handset base is solid due to Nokia’s strong market share – even though Nokia’s market share has dropped slightly during the past years. Some 80% of the active handsets in the Finnish mobile networks were Nokia’s in 2011. Top 10 handset models represented approximately 24% of the total handset base.

The largest operating systems in 2011 were Nokia’s Series 40 and Symbian with almost five million devices together. Symbian was the leading smartphone operating system followed by Android and iOS. Symbian’s market share is about to decrease as the total mobile phone base migrates to newer smartphone operating systems. Windows, Android and Apple, are forecast represent together almost two thirds of the total installed base in 2015. Each of them will provide substantial user bases as their device bases vary between one and two million.

It should be noted that both smartphone and feature phone segments are fragmented into numerous operating system versions, devices manufacturers and phone models. This has forced service providers to develop several versions of a mobile service or application even within the same operating system.

Mobile device base

- Others
- Nokia OS
- S40
- Symbian
- iPhone
- Android Phone
- Windows Phone

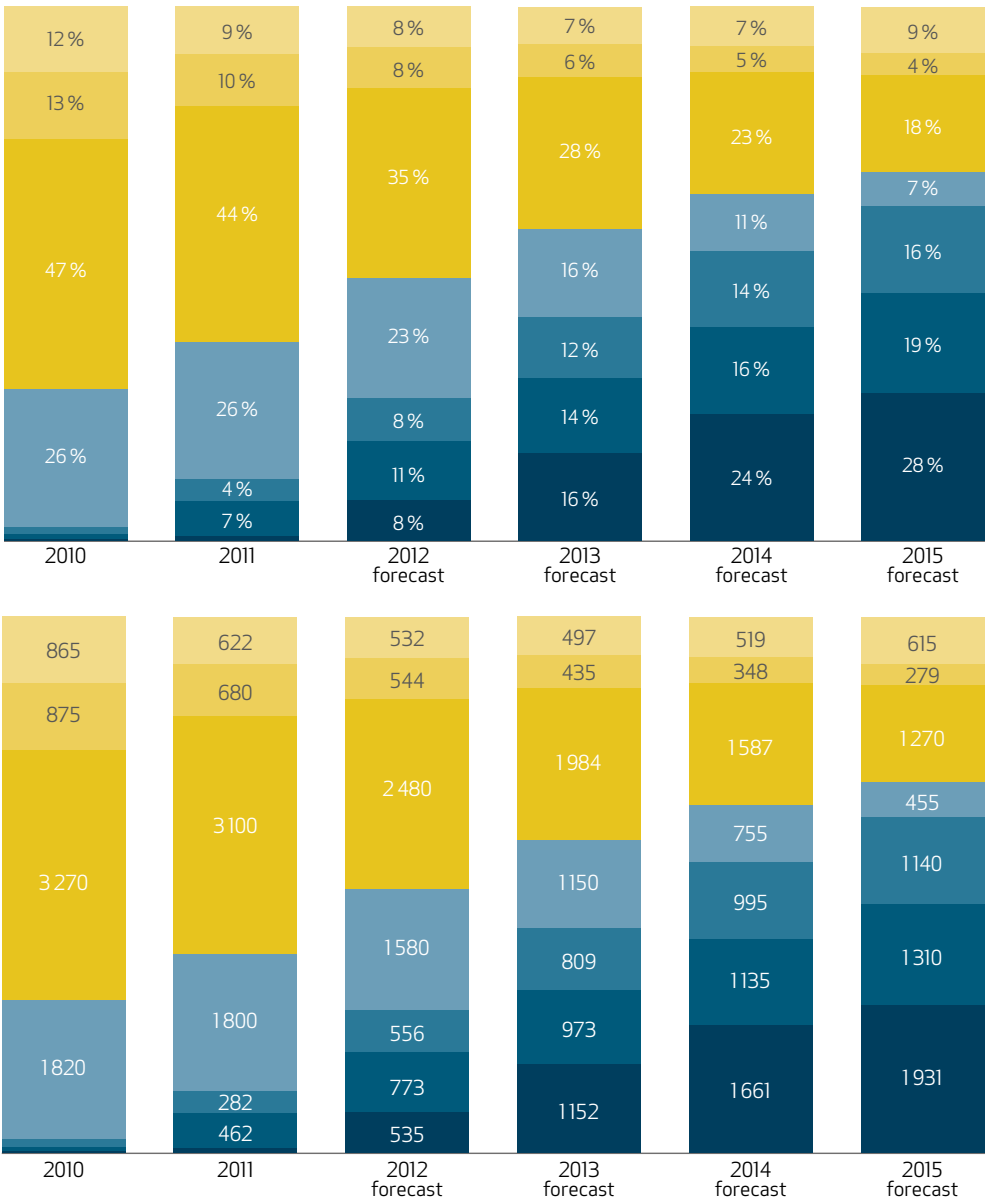
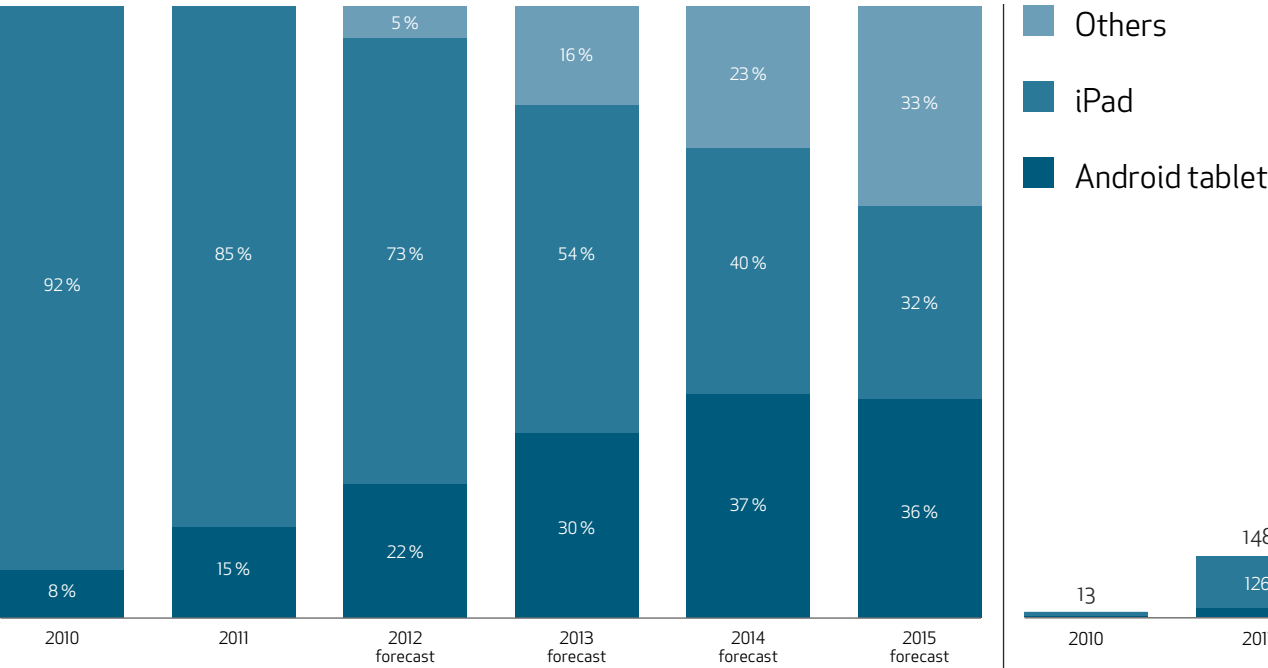


Figure 24 & 25 | Mobile phone market shares by operating system in Finland 2010-2015 presented in thousands and by percentages.
 Source: Aalto University/ MoMIE project, Idean, 2012
 Note! The total mobile device base is adjusted into seven million devices, based on the amount of active devices in the Finnish networks in 2011. The device base is assumed to remain in the same level throughout the viewed period of time.

Mobile device base



Tablet device sales has boomed both globally and in Finland. In the end of 2011 the installed base of tablet devices was approximately 150 000 and it is forecast to exceed one million in the beginning of 2015. Apple's iPad is the clear market leader and expected to remain in the lead until 2015. A major driver for the tablet sales in the coming years will be tablets in the lower price points. Apple is expected to remain as a provider of high-end tablets in the higher price points.

Figure 26 | Tablet device market shares by operating system in Finland 2010-2015 (as a % of the total installed base)
Source: Idean, 2012.

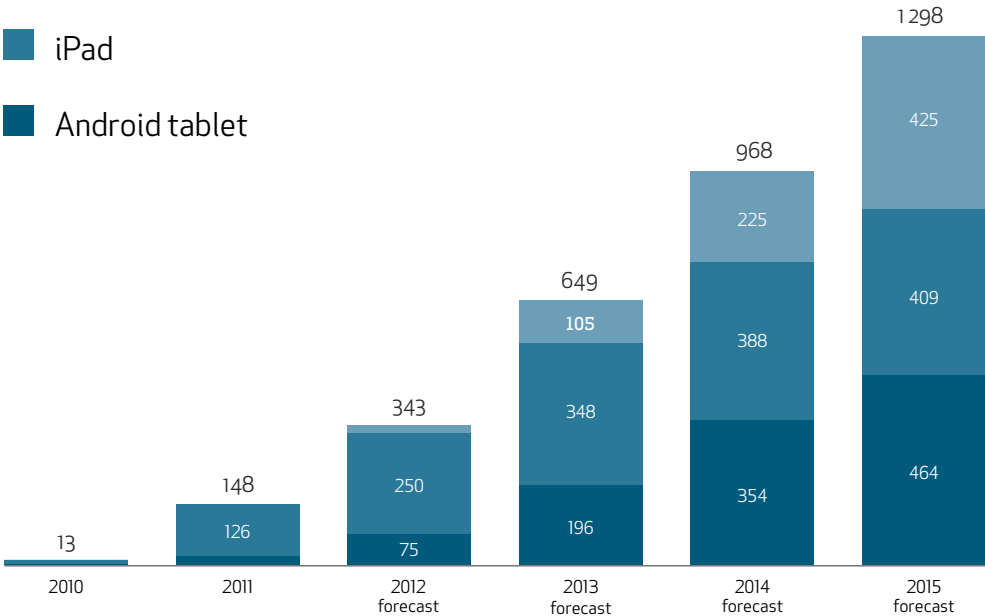


Figure 27 | Installed base of tablet devices in Finland 2010-2015 (thousands)
Source: Idean, 2012.

MOBILE PAYMENT METHOD BENCHMARK

● Mobile payment method benchmark	42
● Survey on IP billing	44

Mobile payment method benchmark



The importance of mobile payments is growing as an increasing number of services and players are entering mobile services market. It's no more a question of enabling merely mobile centric content service payments. In broader visions mobile may even replace the need for cash and plastic credit cards in the long run. This will not happen overnight and meanwhile we will see gradual steps towards this direction. There are already multiple options for mobile payments and new ones emerge continually. The huge opportunities in the area explain also why mobile payments are probably one of the most active business areas for start-ups and traditional players.



A selection of current mobile centric payment methods are visualized in the figure 28. The listed payment methods are provided with estimates on user base, full potential, revenue share and revenue in 2012. Additionally billing opportunities are divided into mobile phone billing and credit card billing. There are multiple other payment choices available for mobile phones that are not covered in the figure 28. Idean estimates that their current significance is rather low in mobile originated purchases compared to the ones presented in the figure. Other options include for example Paypal, bank payments, credit card payments, Kindle, Chrome, iZettle, Ape Payment and Google Checkout.



Ease of use is pivotal in mobile payment considerations. Especially as most of the mobile content purchases are small and sporadic. Typing credit card details with mobile phone is too laborious and slow for casual mobile purchases. This is one of the reasons why premium rate calls and premium SMS are so commonly used payment method for mobile services. SMS is also a proven technology and widely accepted among mobile phone users.

Mobile payment method benchmark






















	Estimated user base % of mobile phone users in 2012	Full potential estimate % of mobile phone users in 2012	Revenue share estimate (publisher's share on average)	Revenue 2012 (M€) Estimated end user spending in 2012	Billing opportunities Mobile phone billing Credit card billing	
Premium rate call	 45%	 72%	 84%	167	✓	
Premium SMS	 40%	 80%	 75%	68	✓	
App Store	 8%	 8%	 70%	6		✓
Nokia Store	 7%	 58%	 70%	2	✓	✓
Google Play	 7%	 11%	 70%	1	✓	✓
Windows Marketplace	 7%	 8%	 70%	1	✓	✓
IP Billing	 5%	 80%	 85%	1	✓	

Figure 28 | Mobile payment benchmark

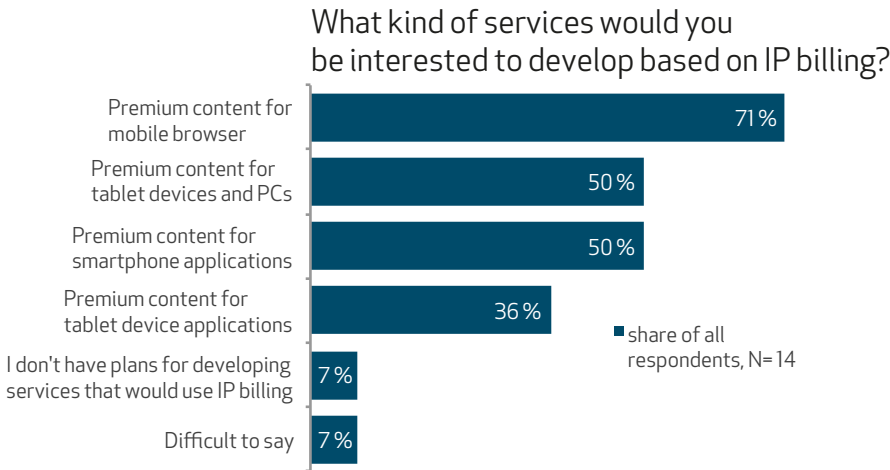
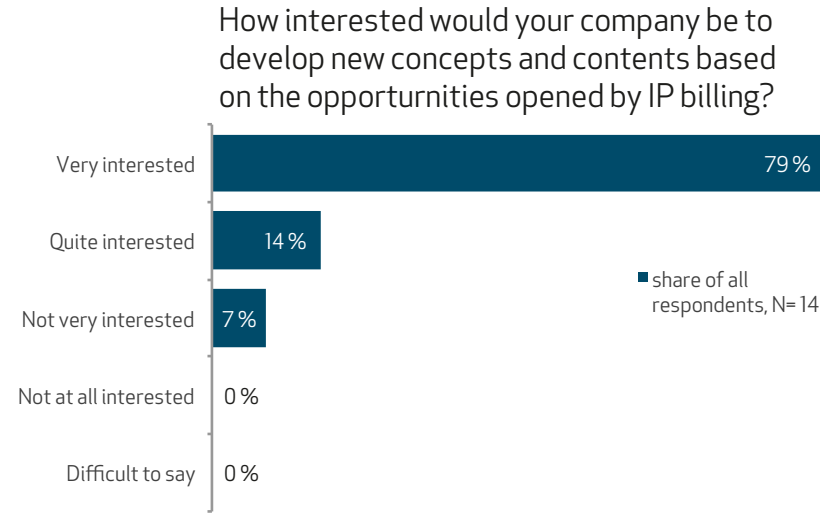
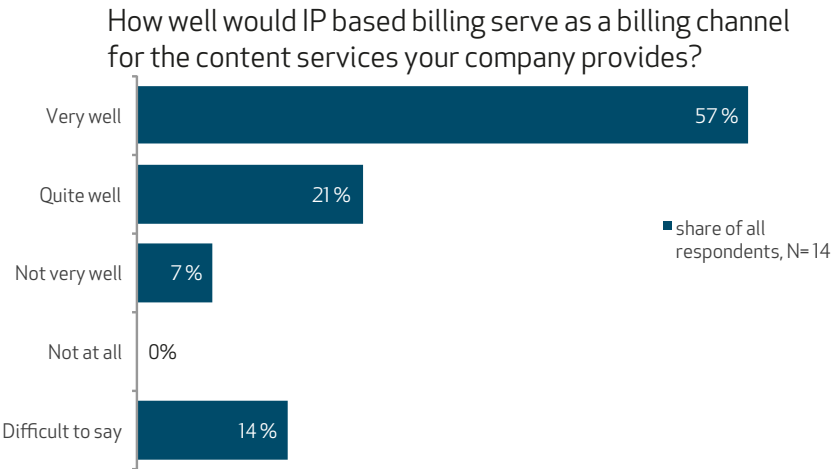
Source: Idean, 2012

Survey on IP billing

In 2012, two out of the three major mobile operators in Finland have announced that they are introducing a new billing service, IP billing, for mobile services. The third one, DNA, has not taken a stand on this issue yet. Elisa published a press release about its plans for introducing the billing service and has piloted it with MTV3 in the spring 2012. Sonera has released its plans for introducing the service in a conference.

The IP billing will provide a new mobile phone bill based billing opportunity along SMS and premium rate call billing. The new billing method will allow easy billing of a variety of online services.

TNS Gallup conducted a survey in March 2012 where Finnish content service providers asked about their views on the new billing channel. All together 14 service providers out of total 178 answered to the questions. The results express positive expectations to the service.



Figures 29, 30, 31 | Surveys on IP billing

Source: TNS Gallup, March 2012

Interviews and Sources

Interviews:

Antti Riikonen - Researcher at Aalto University

Hanna Fröman - Country Manager, Ericsson IPX

Ilkka Lehto - Lakiasiainpäällikkö, Teleforum ry.

Jari Lahti - Head of Internet, Mobile & New Services at Finnish Broadcasting Company

Joni Öfverström - VP Sales, Kuulalaakeri

Juhani Kivikangas - Toimitusjohtaja, Teleforum ry.

Sampo Koskinen - Markkinointisuunnittelija, Mobiili ja Sosiaalinen Media - Fonecta Oy

Satu Mäkinen - Liiketoiminnan Kehitysjohtaja, Kuluttajapalvelut, Fonecta Oy

Timo Smura - Postdoctoral Researcher at Aalto University

Tommi Kankare - Business Development Manager, Fonecta Oy

Toni Leppänen - Head of Product Group, HS.fi at Helsingin Sanomat

Ville Heijari - VP Franchise development, Rovio

Sources:

Eat.fi:n mobiilisovellukset suosittuja, verkkosivujen käyttö mobiililaitteilla olematonta (<http://bit.ly/NcuOtU>)

Ruutu.fi:n mobiilikäyttö kasvussa (<http://bit.ly/KAwyrf>)

Mainostaja tableteissa (<http://bit.ly/NxhGyh>)

Lumiaan sovittautuva Sampo Pankki: mobiilipankin käyttö kasvaa vauhdilla (<http://bit.ly/MqTj3i>)

Mobile Handset Population in Finland 2005-2011, MoMIE project report May 15th, 2012, Antti Riikonen and Timo Smura (<http://bit.ly/Ki2Z29>)

Viestintämarkkinat Suomessa, Vuosikatsaus 2011, Viestintävirasto 2012

Kotek, (<http://www.kotek.fi/>)

Apple's App Store Downloads Top 25 Billion, Apple 2012, (<http://bit.ly/yBiSmM>)

