



September 2012

Mobile Commerce FROM EVOLUTION TO REVOLUTION

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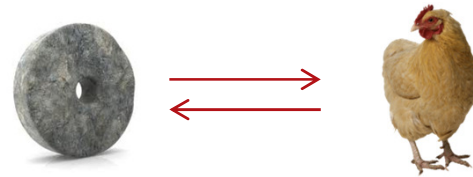
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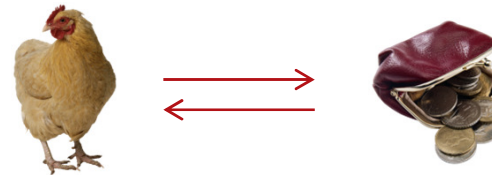
THE EVOLUTION OF COMMERCE

MCOMMERCE HAS CLEARLY BEEN ESTABLISHED AS THE NEXT STEP IN THE EVOLUTION OF COMMERCE

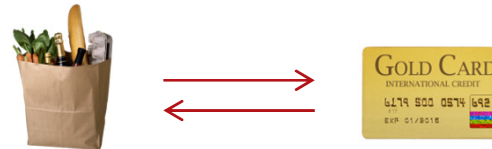
Barter has existed since the dawn of time



Coins were introduced ca. 700 B.C.



Credit cards were introduced in 1950



The first eCommerce transaction was completed in 1994



The first mCommerce transaction was completed in 1997



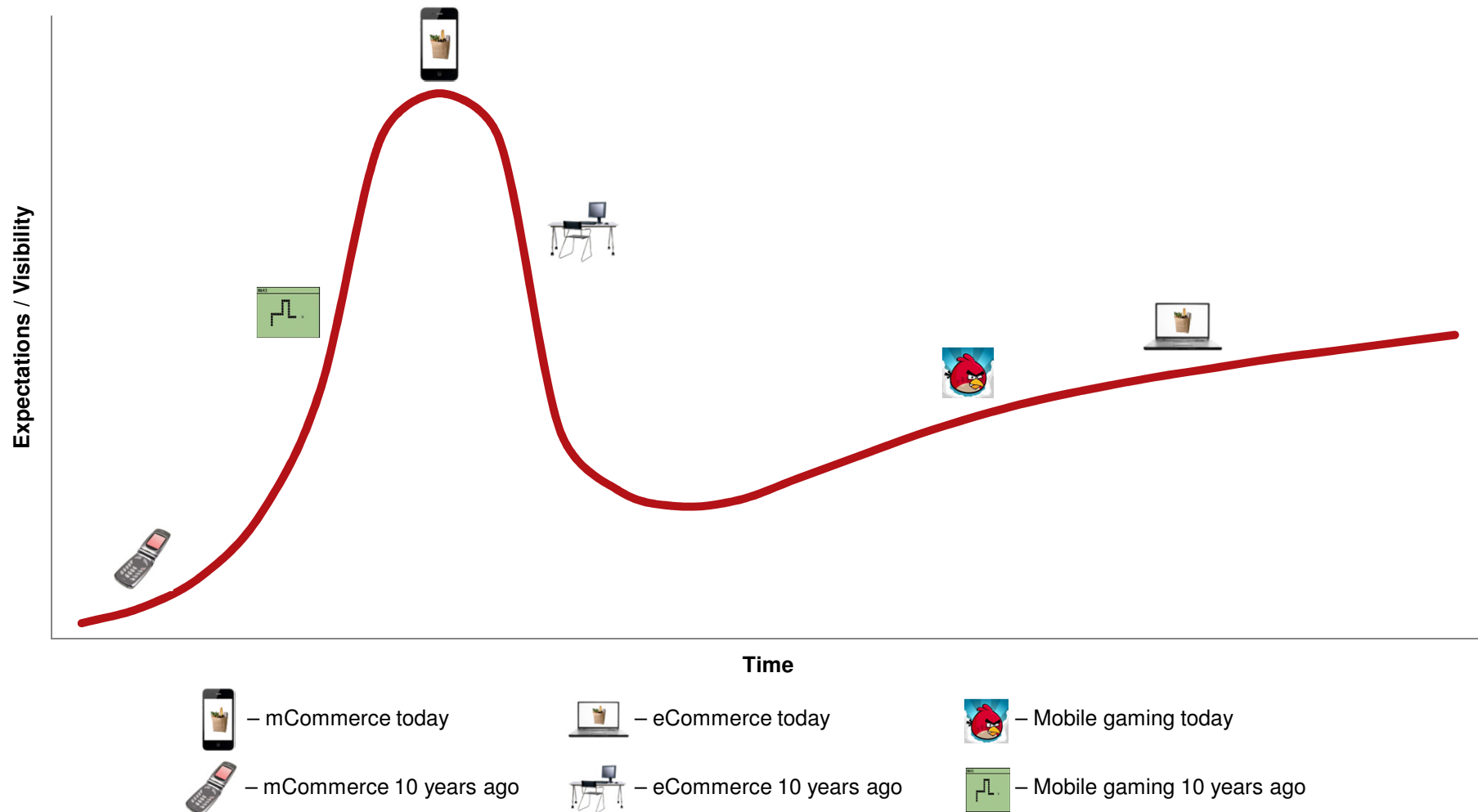
WHAT IS MCOMMERCE, REALLY?

SUPPLY IS BROUGHT CLOSER TO WHERE DEMAND IS CREATED VIA THE MOBILE PHONE'S UNIQUE FEATURES



WHERE ARE WE ON THE HYPE CURVE?

MCOMMERCE IS EXPERIENCING A PEAK IN EXPECTATIONS, AS PREVIOUSLY EXPERIENCED BY SIMILAR TECHNOLOGIES





THE MCOMMERCE MARKET OPPORTUNITY

6 bn

There are 6 billion mobile subscriptions worldwide

50%

Smartphone penetration rates are soon surpassing 50% in the U.S. and Europe

31%

Average mobile network connection speed is expected to see a CAGR of 31% 2011-2016

59%

of consumers would purchase more frequently via their mobile phone if the user experience was better

47%

U.S. mCommerce sales are forecast to grow by 47% year-on-year 2011-2015...

9%

...and reach 9% of the eCommerce market size by 2016

- » **The scene is being set for a surge of activity in the mCommerce market. Why?**
 - » **Smartphone penetration rates are reaching a tipping point and will soon surpass 50% in Europe and the U.S.**
 - » **Globally the mobile subscriber base is almost three times as large as the Internet user base, making mCommerce options available to an enormous potential customer base**
 - » **eCommerce has paved the way for mCommerce by transforming the traditional consumer behaviour of purchasing in a physical store. We believe the transition from eCommerce to mCommerce will therefore be much smoother**
 - » **The poor user experience currently associated with mCommerce will improve with increased investment and sector maturity**
- » **mCommerce is in many ways an evolution of eCommerce, but the concept will to a large extent revolutionise how supply meets demand by further transforming traditional consumer behaviour**
 - » **Remember: mCommerce *is not* mobile eCommerce**

Scope of the report

In this report we focus on the non-payment side of mCommerce: what we see in the market today, how we believe it will evolve, and how to capitalise on the coming changes. Mobile payments are excluded as we covered the topic in a research report published July 2011 ("Mobile Payments – It's payback time!"). It is, however, discussed in context as an enabler for mCommerce adoption.

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MCOMMERCE IS NOT MOBILE ECOMMERCE

MCOMMERCE IS MUCH MORE THAN ECOMMERCE ON A SMARTPHONE

- » At points of disruptive technology shifts, old structures often migrate onto a new medium and are kept until a better structure is developed
 - » When TV first came, people would be filmed reading a script containing the news, just as they did with radio
 - » Later, when the Internet came, web pages were essentially print media in digital form
- » To a large extent we today see that mCommerce is focused on porting traditional eCommerce onto the mobile platform
- » However, while this will be a large part of the mCommerce ecosystem, mCommerce is comprised of a multitude of different services and solutions that utilise the full benefits of mobile
 - » Mobile has intrinsic characteristics that cannot be utilised in traditional eCommerce such as location, constant availability, a camera, etc.
 - » We are currently seeing many of these characteristics being utilised in different ways primarily in the app world such as mobile coupons, shopping apps, QR codes, location based services, mobile payments, etc.

HISTORICALLY IN TECHNOLOGY SHIFTS THE FIRST STEP HAS BEEN PORTING THE OLD ONTO THE NEW MEDIUM



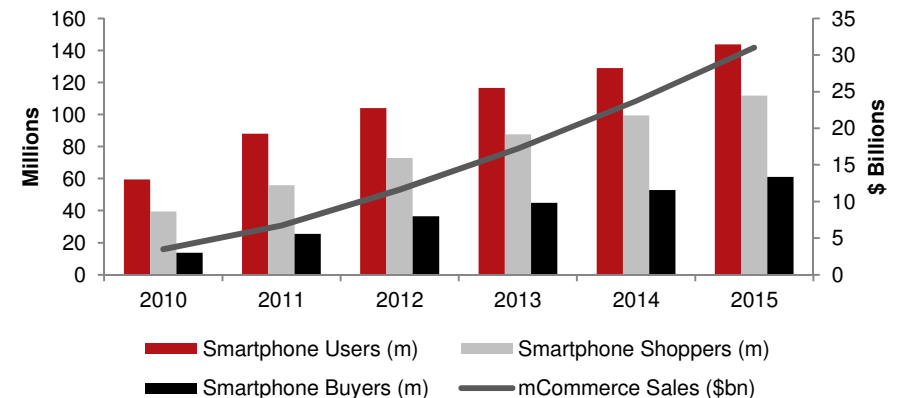


THE MCOMMERCE MARKET HAS A GREAT POTENTIAL

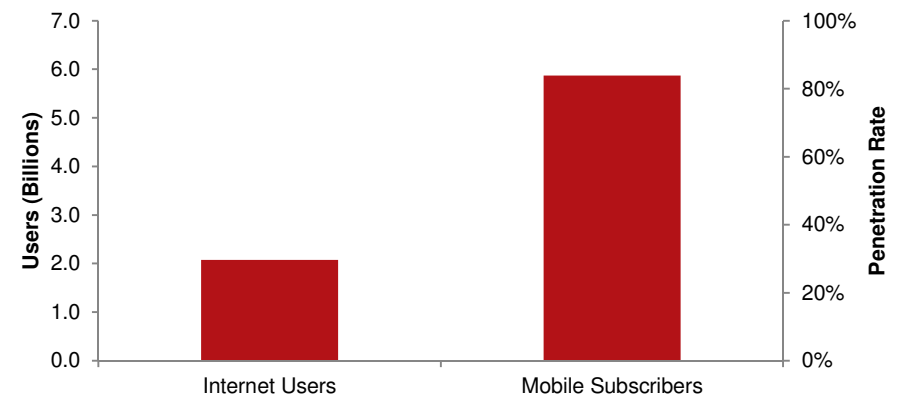
MCOMMERCE – SET FOR EXPLOSIVE GROWTH FOR YEARS TO COME

- » Even though the first mCommerce transaction was completed in 1997, it is now that the market – facilitated by the introduction of the smartphone – is gaining momentum
- » There is a clear trend that consumers are using, and will increasingly be using, their mobile phones for shopping
 - » During the 2011 holiday shopping season in the U.S. 14.6% of all online sessions on retailer's sites were initiated from a mobile device (5.6% in 2010), and sales from mobile devices reached 11.0% (5.5% in 2010)
- » Additionally, there are many shopping apps available for mobiles and many retailers have launched branded apps
 - » 85% of retailers in the U.S. say that mCommerce will be a focus in 2012 (up from 68% in 2011)
- » For large scale adoption to occur, ecosystems need to form in order to provide a satisfying shopping experience
 - » Once ecosystems are in place, the adage "getting a shopper into the [physical] store is half the battle in making a sale" will truly be challenged due to the customers' ability to compare prices, read reviews and complete purchases with their mobile phones

U.S. MCOMMERCE SALES FORECAST TO GROW AT A 47% CAGR 2011-2015



THERE ARE ALMOST THREE TIMES AS MANY MOBILE USERS COMPARED TO INTERNET USERS GLOBALLY



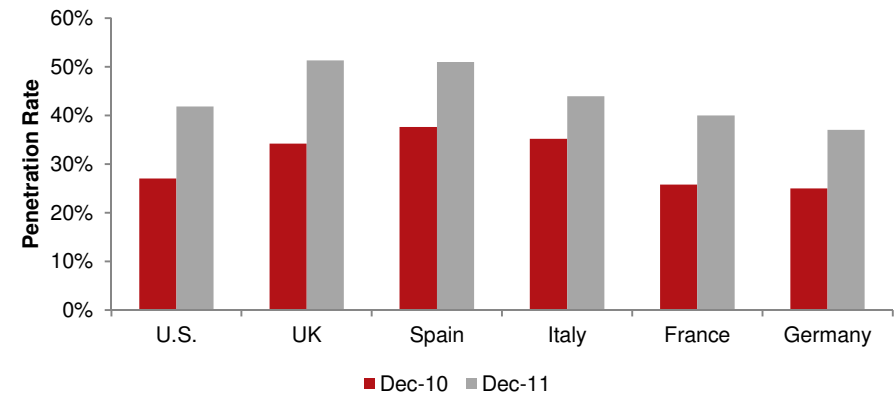


THE GROUNDWORK FOR ENABLING MCOMMERCE HAS BEEN LAID

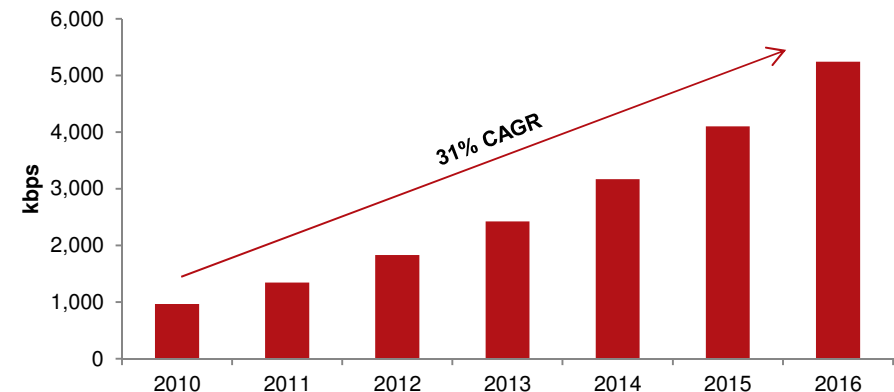
ENABLING FACTORS ARE SETTING THE SCENE FOR TRUE MCOMMERCE TAKE-OFF

- » mCommerce prerequisites are starting to fall into place:
 - › Smartphone penetration has increased rapidly, representing at the end of December 2011 42% in the U.S. and 44% in the EU5¹
 - › Mobile network and processing speeds have been increasing rapidly, thus enabling mobile phones to become truly mobile computing devices
 - › Consumers are using mobiles more and more, mostly incrementally to PC usage, and are increasingly expecting a full “PC experience” on mobile phones
- » However, in the near term, a number of obstacles are in the way of allowing mCommerce to provide the transformational shopping shift that we expect in the long term
 - › The user experience is not there yet
 - › Most apps live in isolation and provide point solutions
 - › The payment ecosystem remains extremely fragmented

SMARTPHONE SHARE OF TOTAL MOBILE SUBSCRIPTIONS



AVERAGE MOBILE NETWORK CONNECTION SPEED FOR SMARTPHONES GLOBALLY



¹ UK, Spain, Italy, France, Germany
Source: Cisco, comScore

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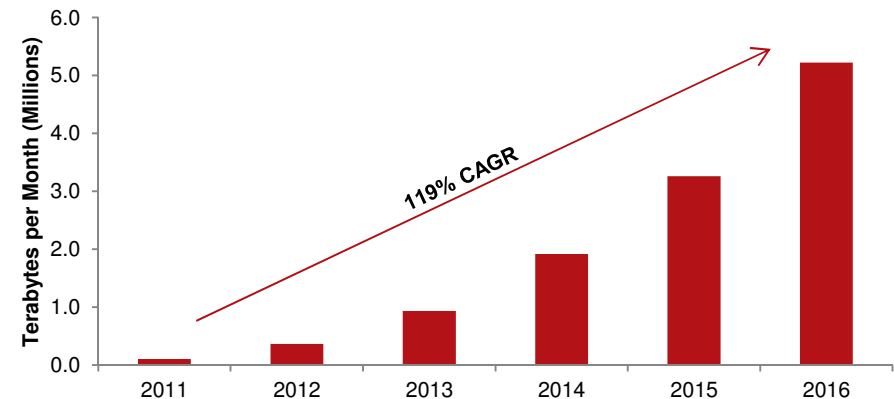


BRIDGING THE GAP BETWEEN SUPPLY AND DEMAND

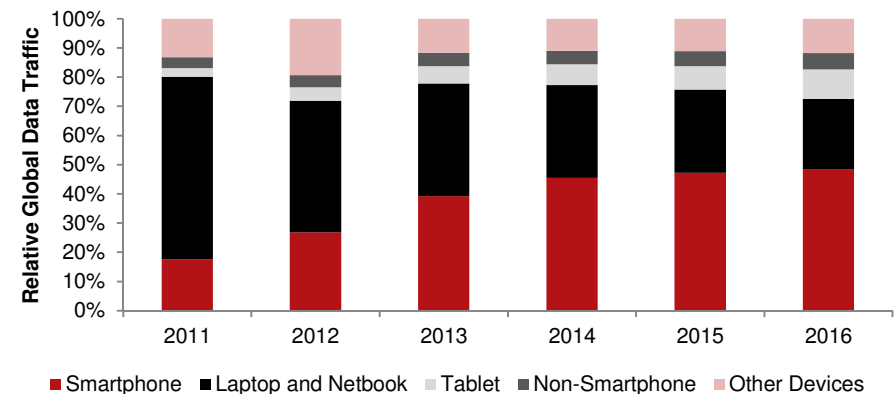
MCOMMERCE IS MOVING SUPPLY CLOSER TO WHERE CONSUMER DEMAND IS CREATED

- » As consumers have their mobiles on them at almost all times, as opposed to their PCs, this is the channel they can use to shop anywhere at anytime
- » One of the key capabilities that mobile phones have is moving supply closer to where demand is created. Examples include the potential to:
 - › Use image recognition to purchase a poster of a painting seen at an art gallery
 - › Buy movie tickets through a QR code seen on an ad on the subway
 - › Use location based apps to find and book a restaurant in one's vicinity
- » The ubiquity of the mobile device will require, and ultimately lead to, supply also being available anywhere, at anytime, to cater to shoppers' demands
 - › This will create opportunities and challenges for merchants, both in the short and long term

EXPLOSION IN GLOBAL SMARTPHONE DATA TRAFFIC



SMARTPHONES EXPECTED TO ACCOUNT FOR 50% OF TOTAL GLOBAL DATA TRAFFIC BY 2016



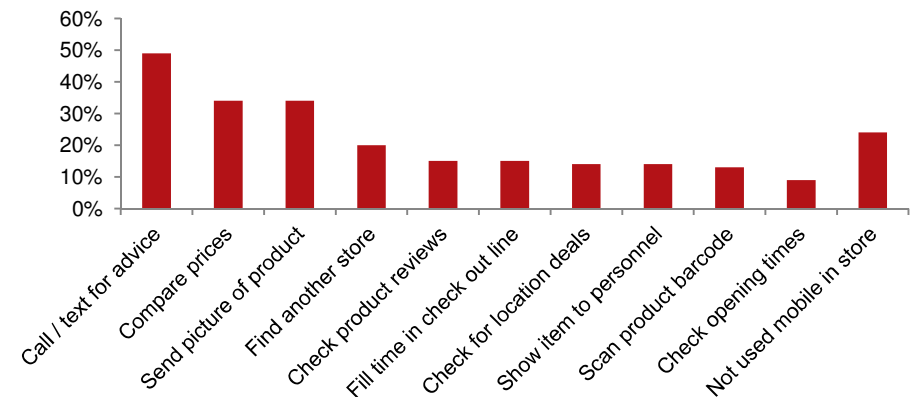


THE MERCHANT PERSPECTIVE

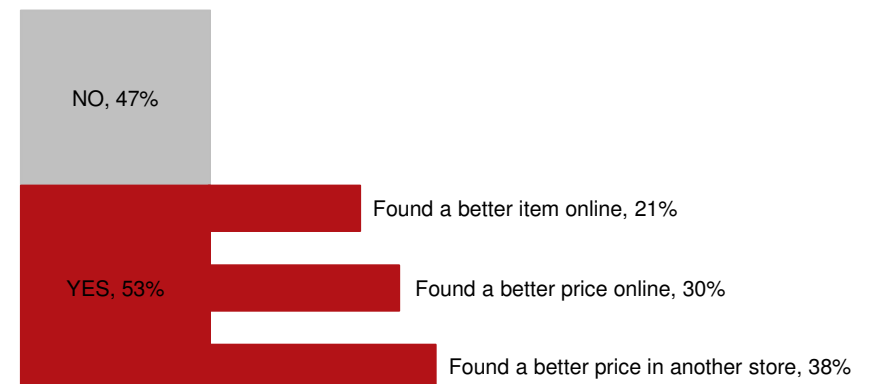
MERCHANTS THAT SUCCEED IN ATTRACTING MCOMMERCE ATTENTION WILL TRULY BENEFIT

- » Merchants that do not adapt to the coming mobile onslaught have a lot to lose
- » Shoppers are already increasingly using their mobiles when shopping despite the less than optimal user experience
- » A survey from On Device Research in May 2012 suggested that more than half of consumers that use their smartphone in any way related to commerce have stopped a purchase in store as a result of using their mobile phone
- » The same survey suggested that the most important use of the mobile phone when shopping is finding the best available price
- » Also of note is that 76% of mCommerce users have used their mobile in a physical store
- » These numbers are set to increase at a rapid rate as smartphone penetration increases, shopping apps become more common and – perhaps most importantly – apps become more user friendly and efficient
- » Retailers need to assume that customers in their physical stores will have total price and location visibility and access to competing products
- » Retailers will need to embrace mobile technology to create perceived value-add for consumers
- » Retailers that fail to capitalise on this will not fare well compared to those that do

U.S. SMARTPHONE OWNERS' USAGE OF MOBILE PHONES WHEN SHOPPING IN STORE



53% OF US SHOPPERS HAVE ABANDONED A PURCHASE IN STORE AS A RESULT OF USING THEIR MOBILE PHONE



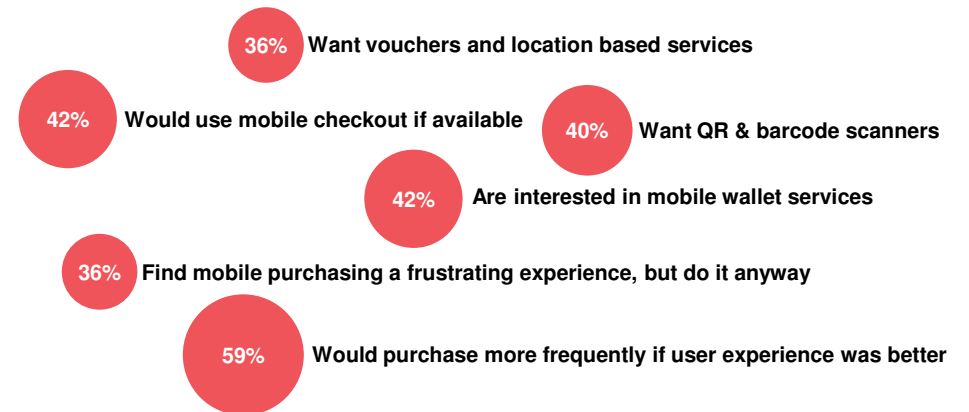


THE CONSUMER PERSPECTIVE

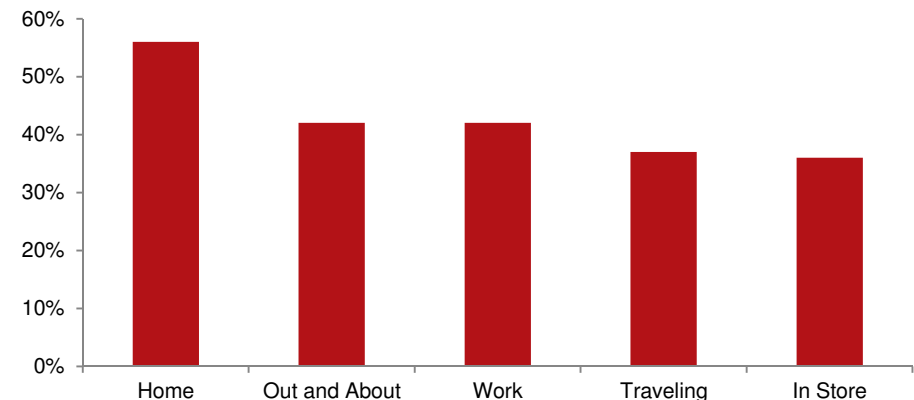
CURRENTLY CONSUMERS ARE NOT FULLY SATISFIED WITH RETAILERS' MCOMMERCE OFFERINGS

- » Shopping on the mobile is a natural extension of what consumers do on their PCs
 - › The transition from purchasing in a physical store to purchasing online is far greater than the transition from eCommerce to mCommerce
- » There is strong demand from consumers to have the option to use their mobile phones as shopping devices
- » Most purchases through mobiles are completed at home, which is not that different from eCommerce
 - › Consumers are not yet satisfied with retailers' offerings related to location based services, QR scanners and other unique mobile phone features
- » Mobile phones provide obvious consumer benefits:
 - › Price comparison while in a store
 - › Product information and information about substitutes
 - › Location based services
 - › Social shopping
 - › Card on file / one click check out solutions

STRONG DEMAND FROM CONSUMERS



LOCATION WHEN PURCHASING ON A SMARTPHONE



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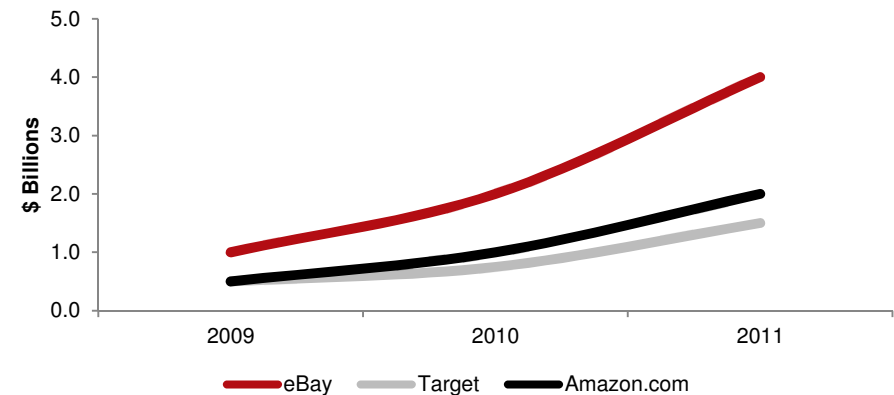


MCOMMERCE IS EVOLVING INTO SOMETHING BIG

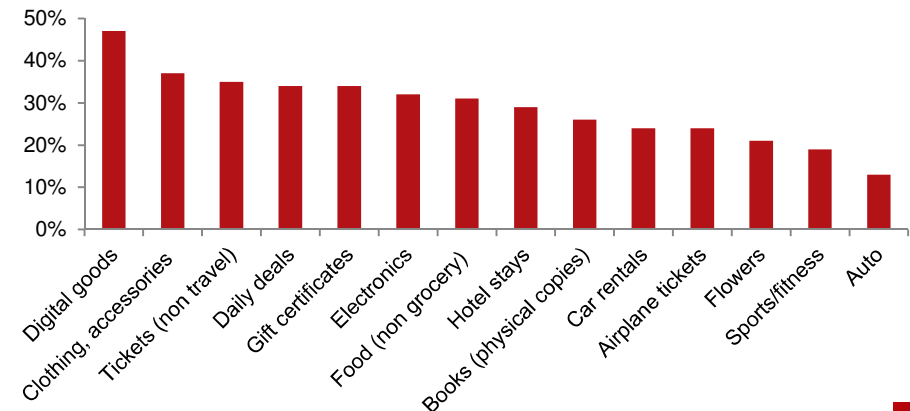
GREAT FRAGMENTATION, BAD USER EXPERIENCE – BUT STRONG GROWTH AHEAD

- » There are new shopping apps being made available in the App Store and Google Play every day
- » Increasingly, retailers' websites are redirecting to mobile versions when browsing the mobile Internet, providing customers with an improved user experience
 - » Companies such as eBay and Amazon are recording large increases in sales from their mobile outlets
- » Digital goods, while still the largest product category purchased through mobiles, are likely to be surpassed by other categories in the near term
- » However, there are no complete mobile shopping solutions available today
 - » Each app addresses a subset of consumer needs
- » This provides certain benefits for consumers, but cannot address the large potential market that we envisage
- » Few mobile shopping experiences are on par with the relative ease of using traditional eCommerce as the user experience question has not quite been solved for mobile yet

STRONG GROWTH IN SALES FROM MOBILE FOR MAJOR RETAILERS



PRODUCT TYPES PURCHASED VIA SMARTPHONES IN THE US, 2011



APPS ARE BECOMING INCREASINGLY REFINED

THREE MAIN APPROACHES TO MCOMMERCE ARE BEING OBSERVED TODAY

- ① Shopping apps – applications that aim to give consumers a better shopping experience
 - › Location based services
 - › Barcode/QR scanners
 - › Shopping lists and organisers
 - › Price comparison and reviews
 - › Social shopping
- ② Retailer branded apps – merchants are trying to build loyalty and tie in customers
 - › Apps where actual purchasing is possible tend to be based on a watered down experience of the website
 - › Other apps we have seen are apps to use in-store to entice customers, track behaviour, increase conversion by giving deals and other lock-ins
- ③ Traditional eCommerce mobile apps – online offering ported onto mobile
 - › Few provide a genuinely good user experience comparable to that of eCommerce

WE SEE THREE MAIN AREAS WITHIN MCOMMERCE TODAY



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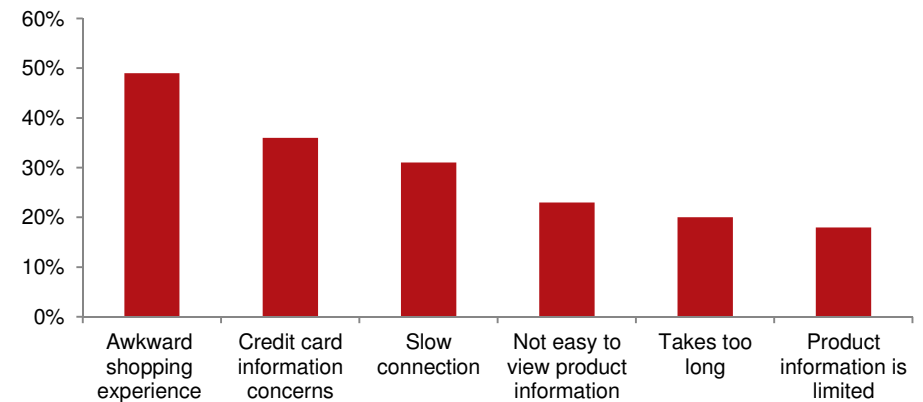


BEFORE MONETISATION THERE IS FRAGMENTATION...

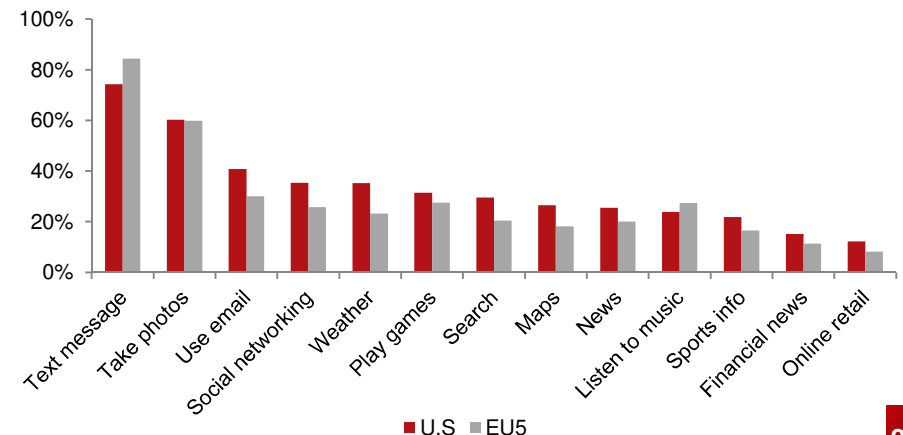
CONSUMERS WANT TO USE THEIR PHONES FOR SHOPPING, BUT ARE NOT PROVIDED WITH A GOOD EXPERIENCE

- » Almost every reason cited for not shopping more on mobile phones relates to a poor user experience
 - › Considering the amount of time people spend on their mobile and the increasing attention received by mCommerce we expect this to change
 - › However, given how long it has taken for traditional eCommerce to provide a good consumer experience (are we even there yet?), it will be an evolving process
 - › In order to retain customers, traditional eCommerce will need to optimise the user experience on mobile through mobile customised websites and mobile apps
 - › So far this development has been slow as retailers seem to believe it is just moving the same customer from desktop to mobile
- » There are no established ecosystems yet that can in reality act as integrators within mCommerce
 - › For that reason, as we expect a lot of development to come within mCommerce, the near term trend will be for increased fragmentation
 - › Many new services and solutions will arise but will not provide a comprehensive solution
- » Mobile payment solutions are beginning to take hold
 - › But it is still too early and too fragmented to hope for payment solution providers to act as integrators

REASONS FOR NOT SHOPPING MORE ON SMARTPHONES ACCORDING TO U.S. ONLINE BUYERS



ACCESSING ONLINE RETAIL IS STILL NOT VERY COMMON AMONG THE MOBILE AUDIENCE



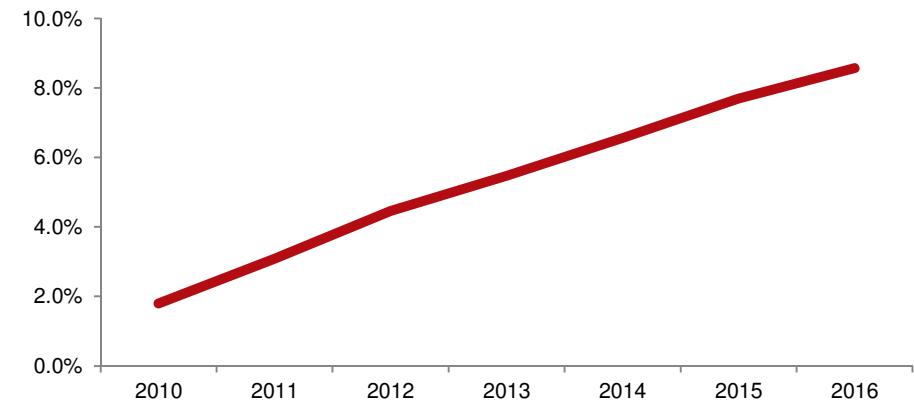


...FROM MONETISATION WE GET CONSOLIDATION...

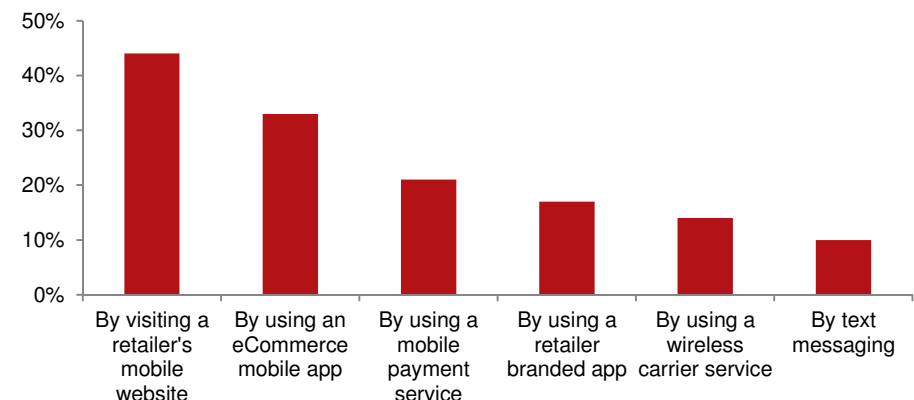
THROUGH ORGANIC DEVELOPMENT AND M&A WE WILL SEE SOME RETAILERS TAKING THE LEAD

- » As we expect many companies to attempt to be solution providers within mCommerce, we also expect many companies to fail
- » There will, however, be a number that do succeed and begin to reap significant financial benefits and drive standardisation
- » We also expect high M&A activity in the medium term with larger and medium sized frontrunners acquiring smaller companies with interesting technologies that can be leveraged in larger organisations and ecosystems
 - » Traditional eCommerce companies that have been slow to the mobile game are expected to make larger acquisitions to buy into the market
- » In this phase things will inevitably start to integrate and work together which will make the mobile phone a powerful tool in shopping, paving the path for a better experience
- » We expect companies that eventually come out as winners in the space to be either those that are able to leverage existing infrastructure, or those that are platform agnostic
 - » For example, utilising card payment infrastructure within the experience will provide lower barriers to entry than trying to create a cheaper solution by cutting out the card

FORECAST MCOMMERCE SALES AS % OF ECOMMERCE SALES



HOW TRANSACTIONS ARE COMPLETED

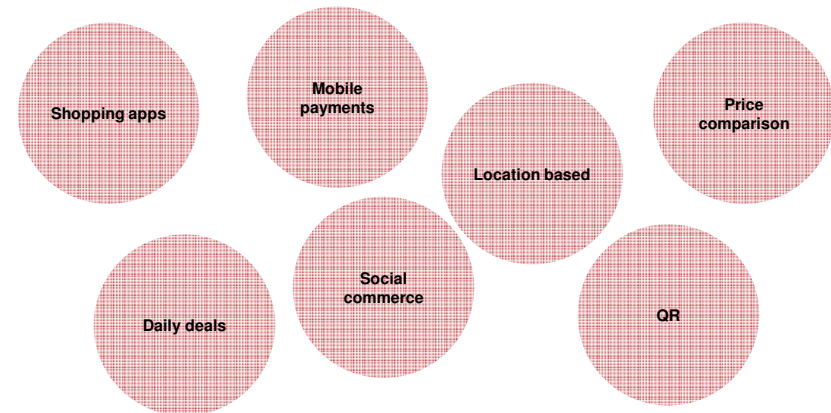


...AND THE MCOMMERCE EVOLUTION TURNS INTO A REVOLUTION

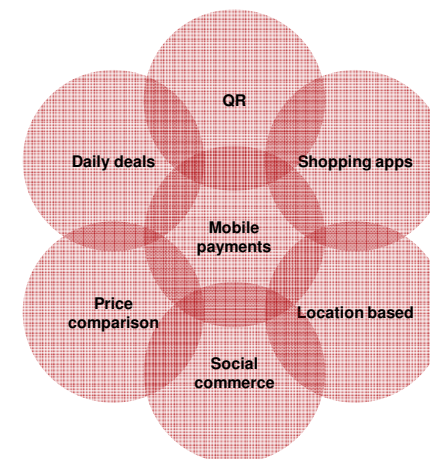
CONSOLIDATION WILL SIGNIFICANTLY IMPROVE THE USER EXPERIENCE

- » As the mobile phone truly becomes a focal point, shopping behaviour will in many ways transform
- » We envisage an operating system-independent and seamless experience that will change the way in which supply and demand meet
- » Consider a simple scenario
 - › Image recognition allows you to purchase most goods you can put in front of your phone
 - › It can also suggest products that are visually similar to something you like to get options of brands and retailers
 - › Your mobile contains your preferred choice of payment, effortless access to any pricing information you are interested in, product information, options of physical stores near you or choice of delivery options
 - › This will effectively allow for consumers to pull the trigger at any time – supply will be right there at the location and time where demand is created
- » And consider the benefits for consumers
 - › Less opaque pricing leads to lower prices
 - › Browsing for products will become much easier
 - › Closer access to merchants in other countries

IN THE CURRENT MARKET FEW MCOMMERCE APPLICATIONS INTERCONNECT PROPERLY...



...HOWEVER WE EXPECT THIS TO CHANGE ONCE AN ECOSYSTEM ENABLER IS ESTABLISHED

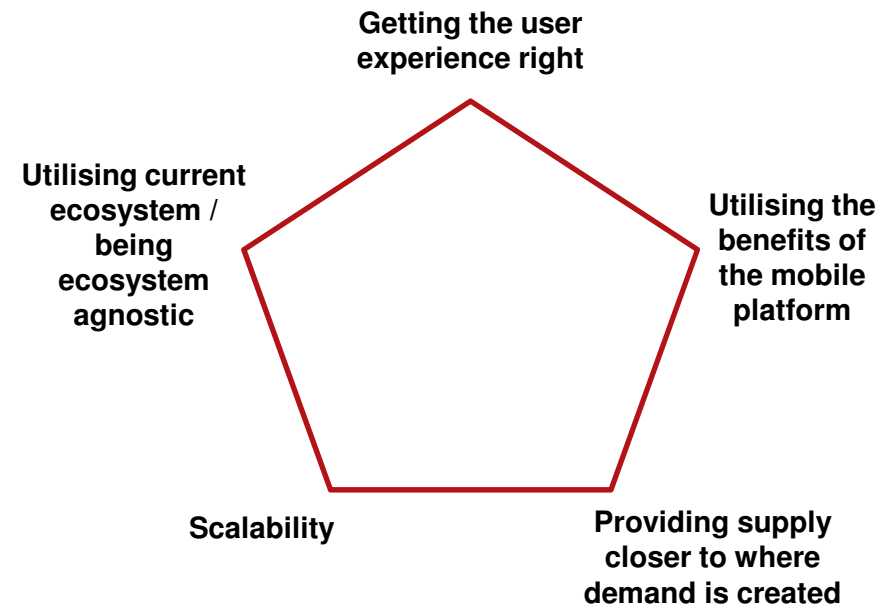


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INVESTING IN A FRAGMENTED SPACE IS RISKY, BUT NECESSARY

- » The high level of fragmentation makes it difficult to make big bets on which companies will come out as winners
- » However, we believe there are certain factors that suggest a higher potential for success, outlined below
- » *Utilising current ecosystems or being ecosystem agnostic*
 - » Companies that are able to leverage existing infrastructures rather than creating new ones, or relying on standards to eventually evolve
- » *Enabling purchases (providing supply) closer in time and location to where demand is created*
 - » Companies that contribute towards closing the gap between supply and demand provide benefits for both consumers and merchants
- » *Utilising the benefits of mobile*
 - » Rather than just porting eCommerce onto the mobile platform, utilising the specific characteristics of mobile will entail a significant potential for increased revenue
- » *Scalability*
 - » For example, a social shopping app that goes viral is more interesting than serving back-end platforms
- » *Getting the user experience right*
 - » It cannot be stressed enough that providing a good experience on mobile phones is paramount to success

FIVE CHARACTERISTICS TO LOOK OUT FOR





MCOMMERCE ENABLERS ARE RECEIVING ATTENTION

Date	Company	Company Description	Placement Value (\$m)	Investors
Jun-12	QTHRU™	QThru provides a cloud-based mobile shopping application with self-checkout, couponing, product information, and store location	3.5	N.A.
Apr-12	pricing	Pricing develops a mobile application for mCommerce services	2.3	spir
Mar-12	Mobio	Mobio Identity Systems is an identity management company that develops and manages mCommerce applications	3.0	rho ROUND TABLE SERVICES LLC
Feb-12	Scan	Scan creates apps for retailers based on QR, NFC and other mobile-based technologies	1.7	Google ventures CHARLES RIVER VENTURES MENLO VENTURES Big Ideas. Realized.
Feb-12	FLUID	Fluid provides Facebook pop-up shops, and mCommerce application design services	24.0	Goldman Sachs
Jan-12	zmags <small>INSPIRATION ENGAGED</small>	Zmags provides cloud-based digital catalog publishing software for online content and shopping	7.0	square 1 bank openview venture partners
Dec-11	APPCONOMY	Appconomy designs and develops mobile applications and application components	10.0	true ventures WTI Neusoft®
Oct-11	Pose	Pose offers a mobile shopping application that captures the in-store shopping experience	3.0	GRP PARTNERS true ventures
Sep-11	IP Commerce	IP Commerce provides a Platform-as-a-Service (PaaS) solution that functions as an operating system for mCommerce	20.7	Venrock MERITAGE FUNDS EQUITY & EXPERTISE intel capital
Apr-11	digby	Digby provides mCommerce and mobile in-store customer engagement solutions for retailers	8.0	BV Battery Ventures S3 Ventures daylight PARTNERS
Dec-10	yoc	YOC provides mobile technology and media solutions for the development of mCommerce infrastructure	6.1	Public Equity Issue
Nov-09	ROAM DATA™	ROAM Data provides development platforms to create and update mCommerce applications	6.5	ingenico
Oct-09	artificial life, inc. <small>mobile games & entertainment, business apps and technologies</small>	Artificial Life provides applications and technologies for mobile phones, and offers OPUS-M, an mCommerce platform	6.5	3M

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Atosho.

HQ: Copenhagen
Investors: Family offices

A market place where retailers can offer their products through a wide range of channel partner websites. Also gives the website visitor the ability to purchase the product via a third party website.

AVITO.RU

HQ: Moscow
Investors: Accel Management, Baring Vostok, Kinnevik, Northzone

Operates Russia's largest online classifieds website, and has a large and growing mobile offering. The company was founded in 2007.**

BRANDOS.se

HQ: Stockholm
Investors: Ture Invest, Family offices

Operates an online footwear store. The company has operations in the Nordic region and the UK. Offers ca. 2,500 shoes from 500 brands and was founded in 2006.*

iZettle®

HQ: Stockholm
Investors: Greylock Partners, Northzone, Creandum, Index Ventures, MasterCard

Lets anyone take card payments anytime, anywhere, via an app and a mini chip-card reader. Launched in Sweden in 2011 and also available in Norway, Denmark, Finland and the UK.

leapcommerce

HQ: San Francisco
Investors: Founders & management

Offers a product recommendation engine with social features and ability to learn about mobile shoppers' preferences. Founded in San Francisco and employs circa 15 people.

LeoVegas

HQ: Stockholm
Investors: Angel investors

Owns and operates a casino that provides games through the web and mobile phones. LeoVegas is the leading Swedish mobile casino.*

madvertise

HQ: Berlin
Investors: Blumberg Capital, Earlybird

Offers mobile advertising services to agencies and advertisers in Europe. It also provides a self-service platform that allows its clients to manage their own campaigns.

MatItem.se

HQ: Stockholm
Investors: Verdane Capital

Sweden's leading online and mobile grocery store. Has enjoyed rapid growth in recent years and is quickly expanding its network throughout Sweden.**

monitise™

HQ: London
Investors: Public company

Offers mobile payments, banking, and commerce network solutions worldwide. Founded in 2004 and employs some 150 people. Listed on LSE AIM, market cap of ca. \$500m.

MyWidz

HQ: Stockholm
Investors: Angel investors

Specialised in simplifying app development and maintenance. Its technology works throughout any platform and mobile device.

OCULUS ai

HQ: Stockholm
Investors: Founders & management

Offers applications that include face recognition, image moderation, brand tracking and ad tracking. The technologies can be used on multiple platforms and OS.

rabble

HQ: Stockholm
Investors: Angel investors

Rabble is a mobile app, available on App Store and Google Play, that gives you access to a wide range of location based coupons and discounts. Has over 300,000 users.

Shopgate

HQ: Butzbach
Investors: Creathor Venture

Offers access to over 10 million products by bringing together over 500 shops in one mobile app. Has ca. 150,000 unique visitors a day via its iPhone, iPad, Android and Windows Phone apps.

Tradedoubler

HQ: Stockholm
Investors: Public company

An affiliate and performance based marketing community. Provides digital marketing solutions to advertisers in Europe. Listed on NASDAQ OMX Stockholm and has a market cap of ca. \$100m.**

W Wrapp

HQ: Stockholm
Investors: Atomico, Greylock Partners, Creandum

Wrapp is a social gift-giving service. It lets you give free and paid gift cards to your Facebook friends via the web or its Android and iPhone apps.

* Current client of GP Bullhound

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