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How SoLoMo is Empowering Consumers, Transforming Shopping and Disrupting Advertising and Retailing

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Introduction

To paraphrase Peter Drucker, the primary purpose of a business is to "create a customer," e.g., to attract and earn the loyalty of customers. For most businesses, this is easier said than done – despite significant effort and investment, attracting and keeping customers are difficult challenges. Apple, Starbucks, and USAA are among the few companies that consistently win customers' praise. As businesses seek customers and vice versa, disconnects between the two often result in disappointment and considerable waste of effort and money by both parties. Factors contributing to the divide include a lack of transparency (data do not exist), limited visibility (data inaccessible) and too little trust (data not shared).

The disconnect between businesses and consumers
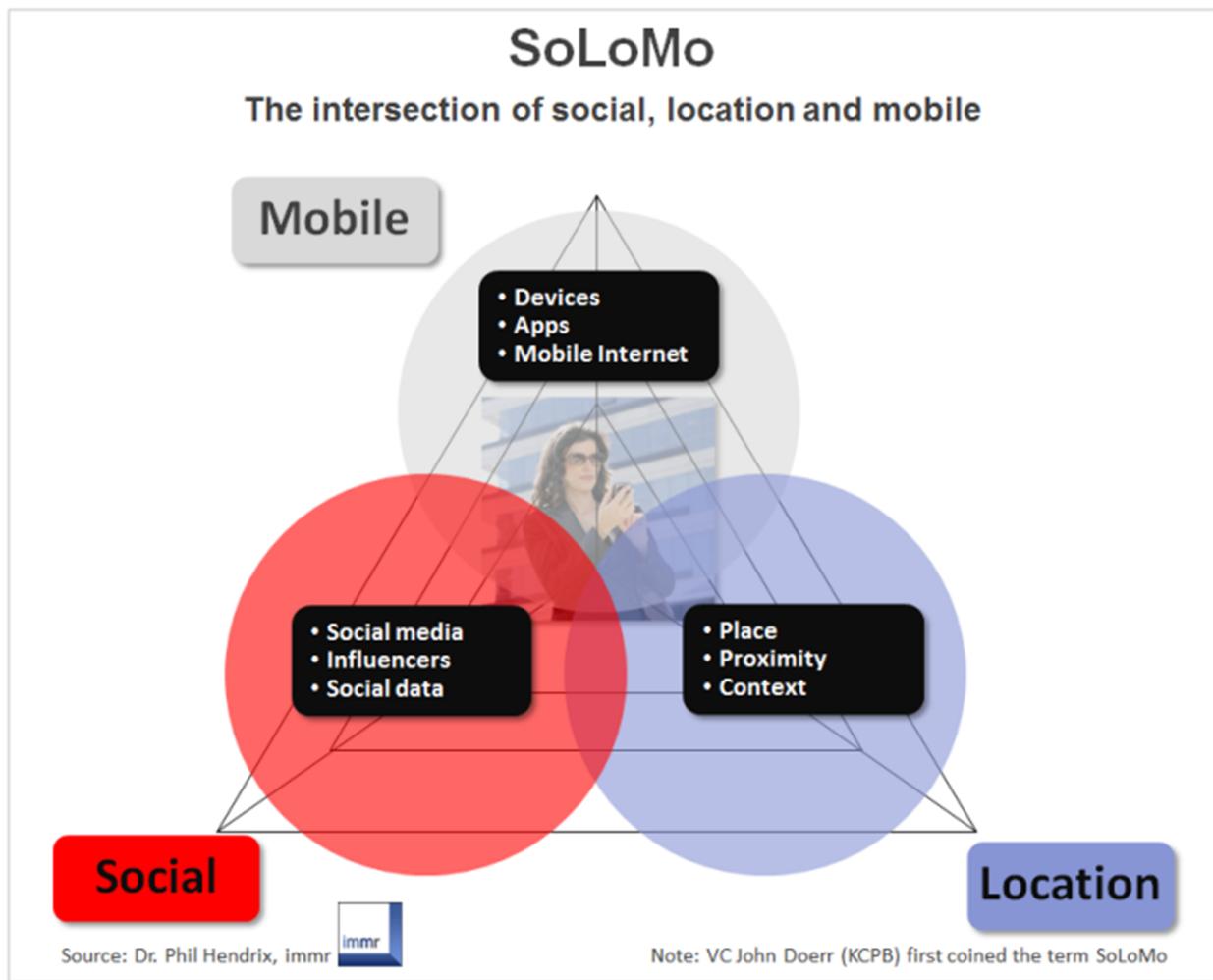
Source: Dr. Phil Hendrix, immr
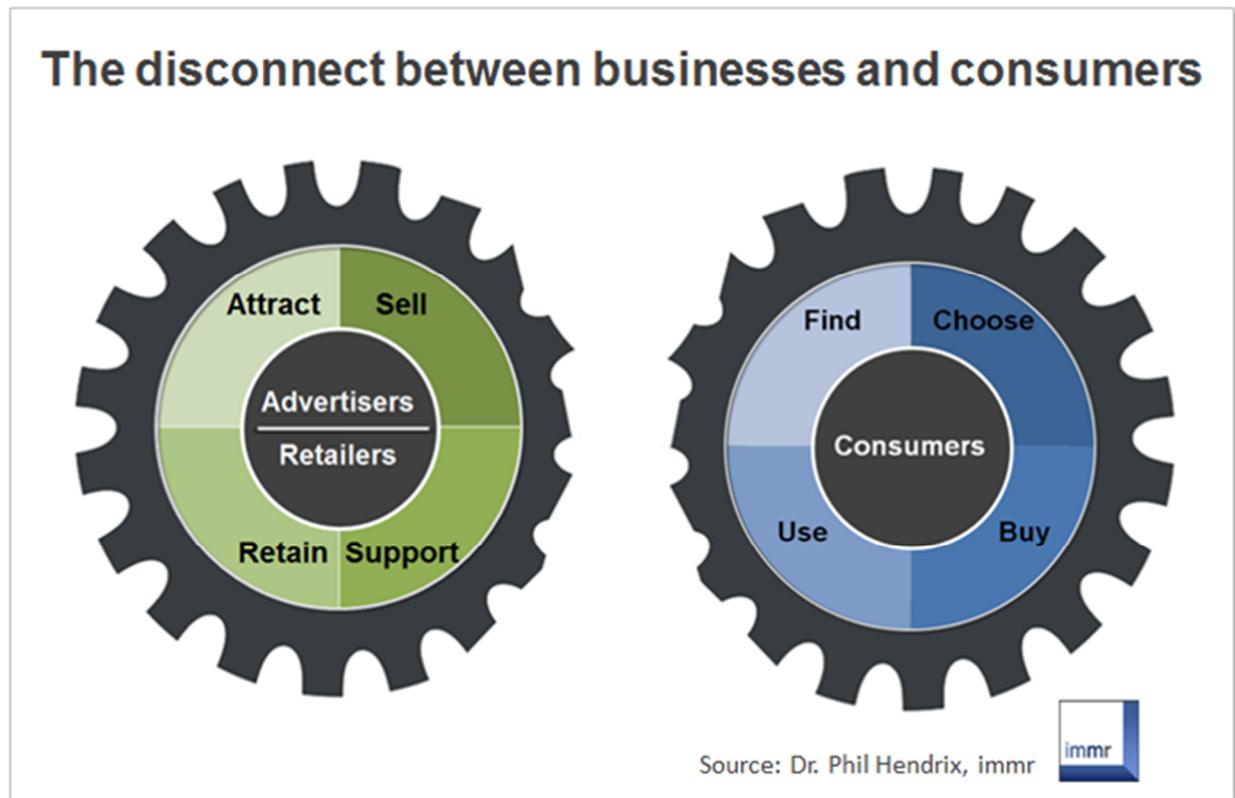
Fortunately, the confluence of Social, Location and Mobile – or SoLoMo, as VC John Doerr of KPCB refers to it – is making data available to consumers and businesses that can improve the process and outcomes for both. For example, smartphones and a new breed of powerful mobile apps, many of which are location-aware and tuned into social media, are empowering consumers and transforming the way in which they shop. As consumers engage in SoLoMo – tweeting about their experience, "checking in," searching for nearby businesses, etc. – they are also generating Digital Signals that are critically

important to businesses. For instance, a large percentage of Facebook posts and Tweets contain opinions – both good and bad – about products, brands, retailers and service providers.

For their part, companies are connecting with consumers via mobile channels (apps and the internet), integrating location-based services into their strategies, and "tuning into" social media. By mining the Digital Signals produced by SoLoMo, companies can develop a 360° view that allows them to better understand consumers, monitor their performance and adjust their strategies accordingly.

This brief describes how SoLoMo is transforming consumers' experience and creating disruptive new opportunities for businesses, especially Advertisers and Retailers.

SoLoMo
The intersection of social, location and mobile

Mobile
- Devices
- Apps
- Mobile Internet

- Social media
- Influencers
- Social data

- Place
- Proximity
- Context

Social

Location

Source: Dr. Phil Hendrix, immr

Note: VC John Doerr (KCPB) first coined the term SoLoMo

The Social Tsunami

The volume of social media content is expanding rapidly. For example, consumers have posted more than 50 million reviews on TripAdvisor, making it the first choice for travelers considering one of the 500k hotels rated. Nearly eight years of content is uploaded to YouTube every day.

Small wonder, then, that consumers are flocking to social media. Use has grown at an extraordinary rate, showing little sign of slowing **until very recently**. Nearly one in six Americans visits a social networking site several times a day (**Edison/Arbitron**). Young adults age 18-29 remain the heaviest users, with 2 out of 3 visiting a social networking site (mostly Facebook) yesterday – other age groups are rapidly closing the gap, however. In the latest **Pew Research**, 46% of consumers age 30-49 visited a social networking site yesterday, while the figure was 32% among individuals age 50-64.

In the U.S., a growing proportion of the time individuals spend online is with Facebook. In just the last 12 months the number of minutes spent on Facebook grew by 69%, while the **time spent on the rest of the web declined by 9%**.

Individuals are also embracing Social Media as consumers. Among social network users, 1 in 4 have "friended" or follow a company or brand. 45% of Twitter users share opinions about a product or brand more than once a day, while 34% share a link about a product or brand more than once per day (**Brian Solis**).   As suggested in the figure below, the exchange of social media is affecting all aspects of consumer' behavior – for example, facilitating the discovery of new products, artists, music, etc.; providing access to others' ratings as they consider purchasing a product or brand; even getting others' opinions real-time before deciding whether to buy the latest fashions.

Social media has become an indispensable tool for consumers while shopping. A **recent study** by L.E.K Consulting found that "Active Mobile Consumers" (60% of smart phone owners) value customer reviews above all other sources, including friends and family, independent product reviews, store displays and sales associates, who ranked dead last. Yelp, Travel Advisor and other social media, of course, amplify and make readily available this "digital word-of-mouth." Social media is even more useful when linked to location and accessed via mobile devices – with geo-tagging, users can filter social media and access relevant information on a smartphone "just-in-time" at the point of need, whether in a store, restaurant or other location.

As Paul Adams (formerly with Google and now at Facebook) observed, "**the world of advertising will fundamentally change** because of the emergence of the social web."

Social media shaping consumers' behavior

Source: Dr. Phil Hendrix, immr
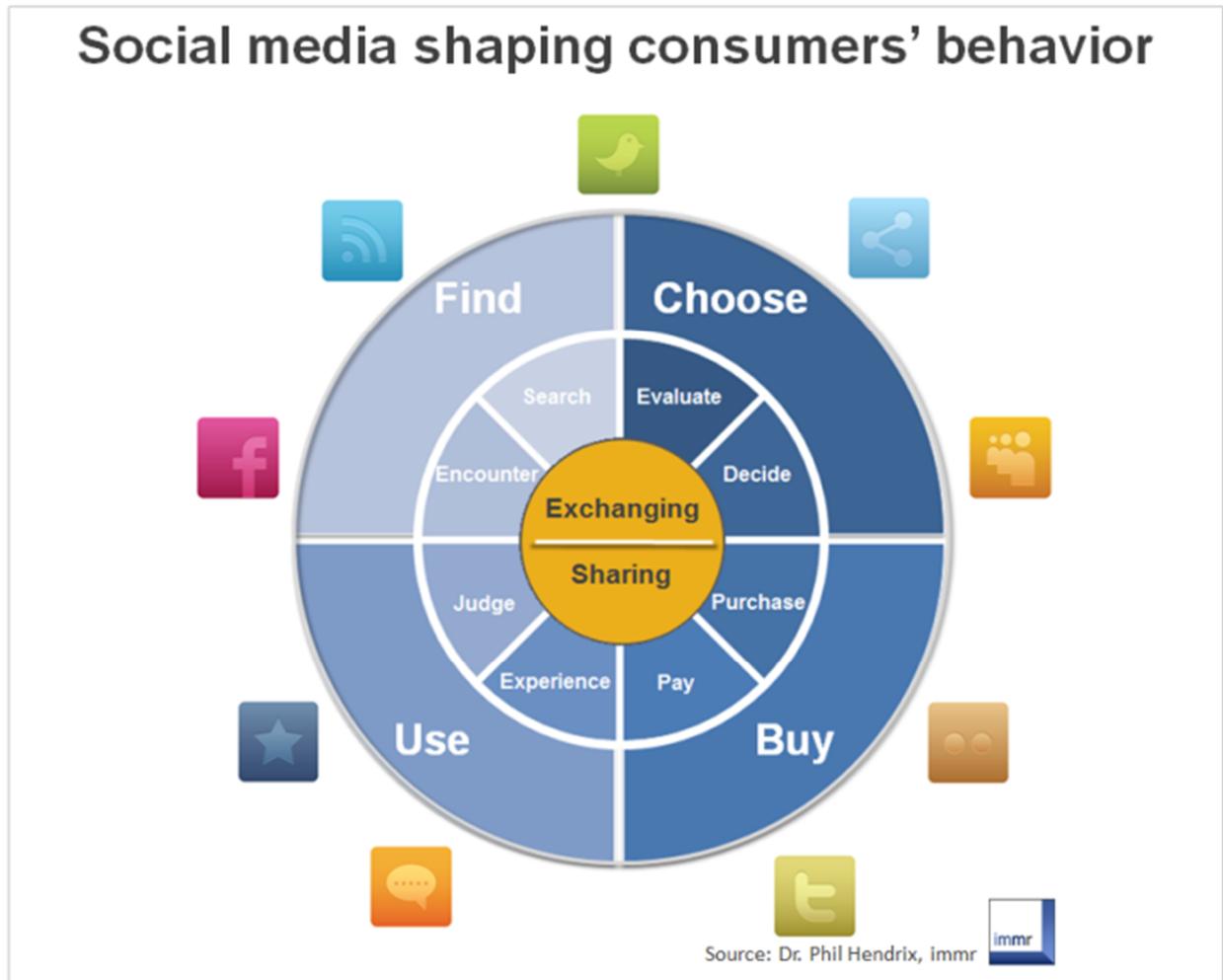
Location - More than Lat/Long

Location-based marketing has been around for quite some time. As Fred Wilson, leading VC and managing partner of Union Square Ventures, observed, "Knowing where someone is in real time — particularly if you have some context around that — **is an incredibly valuable marketing opportunity**."

Recognizing that proximity boosts relevance and response, companies such as Placecast, Xtify and others allow brands and merchants to advertise and extend offers within tightly defined "geo-fenced" areas. Newer solutions such as ThinkNear are giving merchants greater control over offers introduced to consumers, based on proximity as well as criteria such as time of day and demand. Reflecting the strategic importance, within the last year Ebay acquired two important location-based companies: Where, a pioneer in location-based advertising, and Milo, a shopping engine that shows real-time product availability and prices in local stores.

Unheard of before Foursquare invented and popularized the concept, "checking in" is becoming increasingly prevalent – recent Comscore data show that **nearly 1 in 5 smartphone owners** have checked-in at some location. While some observers have criticized the merits and dismissed "checking in" as a passing phenomenon, with the recent deals between Foursquare and partners such as American Express, consumers have even more reasons to check-in in more places. Although Facebook recently "retired" Places, it is redoubling efforts to encourage members to geo-tag updates. As Aaron Strout and Mike Schneider (co-authors, **Location-based Marketing for Dummies**) point out, **the rich layer of location data** allows Facebook as well as Foursquare to personalize recommendations, ads and even offers. Integrating location with **CRM and (potentially) payment systems** offers even greater benefits, including fraud detection, "nearby" offers based on recent purchases, etc.

Location is also important for other reasons. As mentioned above, more and more social media is being geo-tagged, enabling consumers to search for and find information specific to their current location. Google allows individuals to search for results "near me now," while AR (augmented reality) services such as Junaio are making it easier for individuals to scan for and "view" information about products, landmarks and other objects around them. While still in the early stages, Yelp, TripAdvisor, Lonely Planet and other providers of location-specific content and recommendations are integrating AR into their platforms.

Location can also be used to profile and understand consumers' context. GeoIQ, for example, is "overlaying" data on traffic, weather, demographics, spending, surrounding stores and restaurants, etc. This contextual information is proving very useful to commercial and government clients, particularly when combined with geo-tagged Social Media data.

As consumers browse in stores and other venues where information is often needed, cameras and other sensors are transforming mobile devices into indispensable shopping tools. Using the camera phone to scan barcodes and QR codes, consumers can access prices, availability and even recent visitors' comments on everything from products in stores to menu items, museum exhibits and a host of other applications.

With NFC on the horizon, consumers will have the ability to "query" any object that is tagged. Narian Technologies just introduced a **platform called NFC4All** that allows stores and other businesses to place tags that, when tapped, can trigger such pre-programmed actions as (i) paging an associate responsible for the product; (ii) connecting the consumer to a website; and (iii) showing offers and rebates available on the product, among others. Priced at $20 per month and $.05 per "call," Narian's goal is to make it easy and affordable for SMBs to deploy NFC.

NFC is also gaining traction with payment processors, device manufacturers and retailers – while deployment will take some time, the technology has the potential to make any object – products, packages, displays, posters, menus, bottles, etc. – "clickable." The opportunity to empower consumers and remove friction at the time and point-of-need is enormous.

Locative capabilities of mobile devices

Source: Dr. Phil Hendrix, Location: The Epicenter of Mobile Innovation, GigaOm Pro Report, Feb. 2010

With GPS and imaging standard on smart phones and NFC emerging, locations, places and even objects are becoming important new channels for advertisers and retailers. However, key to widespread adoption are deployment as well as consumer familiarity and usability – in a recent study **Lab42** found that less than half of consumers were familiar with QR codes and only 13 percent were successful in scanning a QR code when asked to do so. In New Zealand, mobile operators developed an ad campaign to acquaint users with QR codes and their benefits – as more brands and establishments introduce QR codes, they may (i) use posters and personnel at the point-of-sale to demonstrate the process to customers and (ii) offer sweepstakes, games and other incentives to motivate consumers to "try out" QR codes.

Mobile – the Internet in Consumers' Pockets

Commenting recently on Steve Jobs' contributions, Paul Saffo remarked, "Before the iPhone, cyberspace was something you went to your desk to visit... now **cyberspace is something you carry in your pocket**." And more consumers are carrying smartphones and the Internet with them. Horace Dediu's "countdown clock" estimates that by next June **more than half of the mobile phones in the U.S. will be smartphones**. Over the next few years smartphone adoption will continue to grow, with the number of smartphone users reaching 110M by 2015 (**eMarketer**).

Much of the interest in smart phones is being fueled by innovative developers and "must have" new mobile apps. There are **now more than 100k mobile app developers**, up from just 24k two years ago.

Users are also spending more time on smartphones and shifting time away from traditional media. Android users spend **almost an hour a day** interacting with the Web and apps on their phone. Data from Flurry and Comscore show that **consumers are spending more time on Mobile Apps** (81 mins. a day) than the web (74 mins. a day). Of the time spent on Mobile Apps, about a third is spent on Social Networking apps.

The ubiquity of smart phones, mobile apps and "the internet in our pockets" is reshaping consumers' behavior. Within just five years the percent of online adults reading print newspapers has dropped from 81% to 73% (**Forrester 2011**). Over half of all local searches are now done on mobile devices (Microsoft 2011). Nearly 1 in 4 smart phone owners have downloaded a shopping app within the last 30 days. While only 13% have made a purchase on a smart phone, last November two-thirds of shoppers used a price comparison app on Black Friday, the day after Thanksgiving and the most significant shopping day of the year for both consumers and retailers. Of course, Google, Paypal, the payment processors (Visa, MasterCard, and American Express), FSIs (financial service institutions) and mobile operators (through ISIS in the U.S.) are investing heavily and competing to make mobile payment ubiquitous.

The growth in smart phone adoption and use, coupled with the expansive ecosystem of shopping and social media apps, gives consumers access to information and is empowering a new breed of "super shoppers." A number of important apps are shown in the next section. As discussed in the full version of this report, these apps present both opportunity as well as challenges for advertisers and retailers.

Challenges

The M-commerce ecosystem consists of a wide array of companies, including advertisers, retailers, content providers, social media, mobile operators, app developers and others. Among the challenges facing these companies:

- How do M-commerce providers earn consumers' trust, address their concerns and motivate them to share their "personal data stores?"
- Which companies will consumers trust with their personal data? How will security breaches affect willingness to share?
- How does transparency re: prices and availability affect businesses, especially traditional retailers? Will this lead to greater "price harmonization," as L.E.K. Consulting speculates?
- How can companies avoid consumer fatigue and potential backlash against an ever expanding array of personalized offers?
- As argued below, the data streams generated by SoLoMo activities are enormous but also highly perishable. How will companies leverage these data and incorporate into their processes to respond accordingly in real-time?
- As companies like Paypal, Walmart, and Amazon acquire and develop increasingly sophisticated SoLoMo capabilities, will other businesses be able to compete on analytics and applications?

Digital Signals

As consumers shop for, purchase, use and share their views about products and services, an abundance of what may be called Digital Signals is being generated, as shown below. These digital traces reflect consumers' behaviors, interests and even intentions in the aggregate and increasingly, with their cooperation and permission, of individuals. Over the last decade companies invested a great deal in SEO and SEM – with the emergence of Social Media, leading companies are now focusing attention on SMO (Social Media Optimization).

The following illustrate companies' efforts to manage and optimize social media:

- Insuring that social media assets are **"tagged" with the proper metadata**, much like web pages are tagged for SEO
- Measuring the **impact of "earned" media**, so that ROI-Social Media can be quantified and compared to that of paid media
- Conducting systematic experiments to "test and learn" how segments respond to various social media appeals and campaigns
- Using social media tools to improve customer service, innovation and other critical business processes

The Digital Signals emanating from SoLoMo represent a new and different kind of data – a combination of structured and unstructured data, from disparate sources, in volumes that few companies are equipped to process, much less analyze and respond to. To extract insights and act on these signals in a timely fashion, businesses are turning to solutions for real-time processing and analysis of Big Data.

The following examples from **Datasift**, one of a handful of companies providing access to real-time social media data, illustrate the scope and complexity of just the Twitter stream. From the more than 200

million Tweets per day, Datasift allows users to extract and analyze relevant subsets in a variety of ways – for instance:

- Track Tweets from persons based on various combinations of who they follow – as an example, Lady Gaga followers who also follow President Obama
- Track 100,000+ Geo Locations simultaneously
- Classify and segment tweets by gender, political affiliation, authority and interests
- Detect Tweets in over 30 languages, in real-time
- Record every Tweet into a "very big" datastore for later retrieval and analysis with tools such as Map-Reduce and Hadoop

Large companies like Facebook and Google as well as startups such as OneRiot (**just acquired by WalMart**) are rushing to mine these types of data and make insights available to advertisers and retailers.

- To improve relevance, user experience, and of course click-through rate, Facebook is **testing real-time targeting of ads** based on users' posts and updates. "The aim is to serve ads at split-second speed, as soon as the user makes a statement that is a match for an ad in the system."

- This fall, Walmart will begin implementing solutions developed by Kosmix, the social media analytics company it acquired earlier this year. For customers who opt-in, Walmart will **personalize search results and recommendations** based on "clues" about the customer from their Facebook or Twitter streams.

- Google, of course, personalizes ads displayed with search results based on a variety of criteria, including search terms/intent and location. With Google+, additional insights from the consumer's social networks can be used to tailor search results as well as ads.

- Using OneRiot's "Social Targeting Engine," advertisers from P.F. Chang to concert promoter Live Nation have achieved **CTRs on mobile ads as high as 2%** (compared to the national average of .3%).

As these examples suggest, advertising and offers are rapidly moving toward real-time personalization. SoLoMo digital signals, especially location, interests, intent, and context, will play an increasingly important role, boosting relevance for consumers and yield for advertisers and merchants. Businesses that fail to tune into and leverage these Digital Signals will find it increasingly difficult and costly to compete with leading companies.
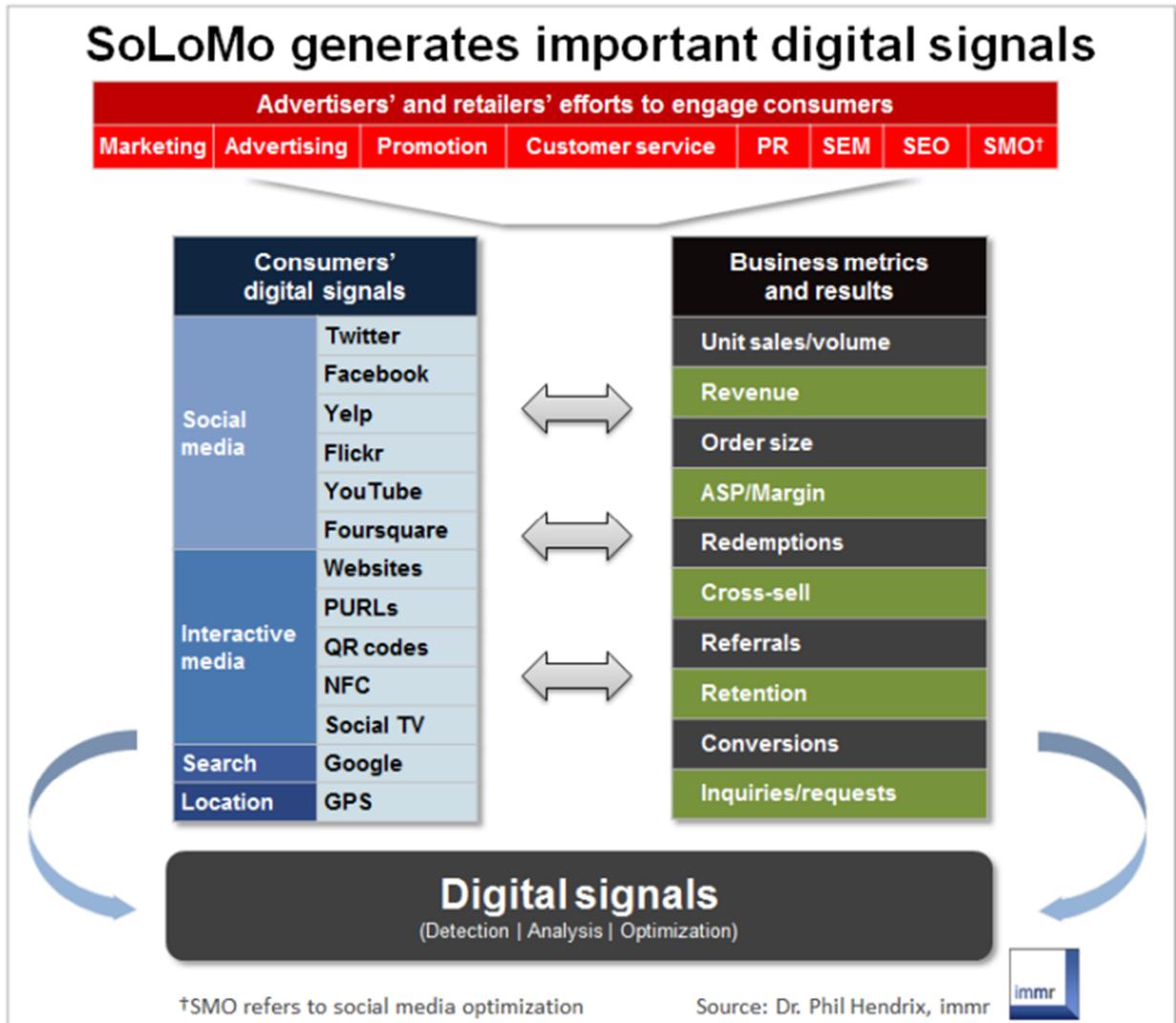
Innovative New SoLoMo Apps and Solutions

Listed in the table below are examples of apps and solutions employing some combination of SoLMo to empower consumers and transform shopping. Leading investors are funding these and other SoLoMo companies, while consumers are downloading and using SoLoMo apps in significant numbers. ShopSavvy, for example, is in the top 1% of apps in the App store. **Thinknear**, a Techstars alumnus with founders from Amazon, includes among its investors Google Ventures, Qualcomm Ventures and **IA Ventures** (firm led by former Wall Streeters, focused on startups harnessing and capitalizing on big data). With the average consumer belonging to a dozen or more loyalty programs, **Stampt** is solving a significant problem for both consumers and merchants – "how do I easily keep track of and redeem my rewards?"

SoLoMo startups transforming consumer experiences

Consumers	Solution	Description	So	Lo	Mo
Discover	GetGlue	• Allows users to check in to TV shows, movies and music • Recommends other items individual is "likely to enjoy" • Rewards achievements with stickers that can be redeemed	✓		✓
	trover	• Members share interesting discoveries within locations • Photos and descriptions geo-tagged, accessible by location • Community features encourage sharing, exchange	✓	✓	✓
Choose	myShopanion	• Enables conversations around products • Three action buttons – Like/Dislike, Own, Want • Post to Facebook and Twitter with one click, get instant feedback	✓		✓
	ShopSavvy	• Enables users to research products at point of sale • Scan bar code, confirm availability and price • Delivers "hyper-relevant" UPC/GPS-targeted promotions	✓	✓	✓
Buy‡	thinknear	• Allows businesses to offer deals to nearby customers at slow times • Takes into account traffic, weather and nearby events • Deals expire in 1–2 hours to boost demand immediately		✓	✓
	AisleBuyer	• Scan, access product information and reviews • Add items to a "digital shopping cart" • Pay via mobile checkout and skip the line at the register	✓	✓	✓
Use	bundle	• Records actual spending from members' FSI accounts • Compares member's actual spend to others in income bracket • Computes "merchant loyalty" based on members' actual spend	✓		†
	STAMPT	• Digital "loyalty card," registered by scanning • Consumers can elect to update Twitter, Facebook • Inputs users' data to CRM, merchant can use to send offers	✓	✓	✓

Source: How SoLoMo is empowering consumers and transforming Shopping, Dr. Phil Hendrix (immr) and Eric Risley (Architect Partners), Sept. 2011

Notes: This above list contains a subset of SoLoMo applications. A more complete list is included in the full report (forthcoming).

†Technically, Bundle is not a mobile app, although it can be accessed on a mobile device.

‡M-Payment solutions will be examined in a separate report later this fall.

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Additional details on these and other companies are provided in the full version of this report.

Conclusion

Despite the challenges above, advertisers and retailers are leveraging SoLoMo to devise and implement strategies that are more consumer-centric. An entire infrastructure is emerging to support their efforts, led by companies such as Datasift, Collective Intellect, Social Nuggets, LocalResponse, GeoIQ and a host of others. As shown in the figure below, SoLoMo can be used to personalize, enable, engage and reward consumers more effectively. For example, with SoLoMo retailers can recognize customers as they enter the store and provide them with a personalized guide based on the customer's interests and even previous purchases; enable shoppers to share feedback with one another (which many online retailers already do); reward consumers in real-time with incentives and reinforcement; and in many other ways.

These and other strategies afforded by SoLoMo are discussed further in the full version of this report.

Disclosure: Social Nuggets is an immr partner and GeoIQ is an immr client.

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