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Digital data opportunities
Using insight to drive relevance in the digital world
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Executive summary

The last few decades have seen a technological revolution that has dramatically changed the way we live and work. Many of the physical objects and services that we interact with daily have become digital – from music and films to Internet-based banking and shopping. In addition, social media sites enable us to interact with friends, family, and businesses in new ways, all of which leave a data trail which is visible to companies that provide these services.

This proliferation of digital products and services results in consumers generating huge volumes of personal data across all aspects of their lives, which is captured by organisations through digital channels or devices. Data about a person's friendship networks, hobbies and interests is captured on Facebook, while details of their shopping patterns are captured by online retailers. In addition to these relatively established data sources, technological developments will continue to generate new sources of consumer data that could offer unique insights into consumer behaviour. In the first section we look in detail at the huge range of digital data sources.

The challenge for businesses lies in how to harness, make sense of, and use this information to generate some form of competitive advantage. Ernst & Young believes that businesses that can access these new sources of data, analyse them and convert them into insight on consumer behaviour, will be able to make their products and services more relevant to their customers. By doing this, they can deliver bottom-line improvements to their business.

Ernst & Young believes that to maximise the potential of digital data businesses need a clear strategy across four key stages to turn data into business benefit:

► Identify and capture potential data opportunities
► Generate insight from data
► Use insight to improve relevance of products and services
► Realise the business benefits

Each of these steps brings its own challenges, and each must be seen within the context of the company's business model. Companies need to ask the question: “Does our digital data support our business model?” In the second section, we look at how companies are gaining business value from two key sources of digital data: social media and real-time location data.

However, Ernst & Young also believes businesses need to play by the rules of the new world of digital data. The third section explores how businesses have to strike a balance between making the most of their customer data to generate value, whilst ensuring that they don't scare customers away or tarnish their own reputation by taking this too far and invading customer privacy.

The businesses that manage to strike this balance, while having a clear vision of how these new sources of data can transform their business, will be able to pull ahead of their rivals in making the most of the huge opportunities offered by digital data.
The growth of digital customer data

Digitisation of products and services is creating a swell of customer data

The last few decades have seen a technological revolution that has dramatically changed the way in which we live and work. Many of the physical objects and services that we interact with daily have become digital. As consumers, our music, images, films and shopping receipts now exist as digital data, and nearly all services that previously relied on high street stores or large call centres, such as banking, travel booking, or home utilities have become Internet-based. In addition, new digital services have been created that enable us to interact with friends, family, and businesses in new ways, all of which leave a data trail which is visible to companies that provide these services.

Consumers are now networking digitally with their friends and colleagues through social media sites. Twitter sees 600 posts per second across its 190 million users, and on Facebook there are 60 million status updates per day, resulting in 7.8 billion opportunities for users to see each comment\(^1\). More recently, with the proliferation of smartphones and tablet computers, there are an estimated 20 million mobile Internet users in the UK\(^2\) who can access all of these services and files on the move.

By analysing these burgeoning data sources, businesses can gain new levels of insight into consumer behaviour.

Figure 1: Illustration of Facebook message reach:

Note: This is 60m Facebook posts per day x average of 130 Friends per member = 7.8bn
Consumers' lives are captured digitally

The proliferation of digital products and services results in consumers generating masses of personal data across all aspects of their lives. This data is captured by organisations through digital channels or devices. For example, data on a person’s friendship network, hobbies and interests is captured on Facebook; details of their energy usage and time spent away from home are captured by energy suppliers; and information about their shopping patterns and how much they spend is captured by online retailers (see Figure 1.1).

### Figure 1.1 — The digitisation of data across all consumer activities

<table>
<thead>
<tr>
<th>Categories of consumer activity</th>
<th>Which companies capture data about this activity?</th>
<th>What insight can this data offer</th>
</tr>
</thead>
</table>
| **Social interactions**       | ° Social and professional online networks (Facebook, LinkedIn)  
° Blogs  
° Special interest networks (last.fm, sports communities) | ° Topics and frequency of updates  
° Friends network (size and location)  
° Hobbies and interests  
° Opinions and attitudes – ‘likes’ |
| **Mobile usage**              | ° Mobile phone network providers  
° App stores (iPhone, Android, Amazon) | ° Communication circle (friends, family, work) and frequency  
° Mobile web usage  
° Location/roaming  
° Entertainment/information preferences (through apps) |
| **Energy usage**              | ° Energy suppliers  
° Online or smart phone energy monitoring tools | ° Energy usage, time of day, amount  
° Time spent away from home  
° Appliance usage (smart meters) |
| **Transportation**            | ° City transport providers (TFL, Oyster)  
° Satellite navigation systems  
° Airlines and railways | ° Commuting patterns  
° Holiday frequency, destinations  
° Locations of home, work, friends |
| **Digital entertainment**     | ° Internet and TV providers  
° Online music and entertainment providers (Spotify, LoveFilm, BBC iPlayer, iTunes)  
° Online media stores (iTunes, Amazon) | ° Amount of leisure time/time of day for leisure  
° TV/movie/music preferences  
° Genre interest |
| **Internet search**           | ° Search engine providers (Google, Bing) | ° Online search preferences  
° Information journey through the web, from site-to-site  
° Time online, interests |
| **Financial**                 | ° Online banking service providers  
° Insurance providers  
° Money management applications (Yodlee, Mint) | ° Demographics  
° Financial products (savings, mortgages, pensions)  
° Income, expenditure  
° Credit risk  
° Direct debit service providers |
| **Shopping and dining**       | ° Physical store and online retailers  
° Online restaurant booking services or review sites (Toptable)  
° Loyalty card programmes | ° Shopping patterns  
° Retail spends  
° Disposable income  
° Interests/hobbies  
° Lifestyle choices (health conscious, young family etc.) |
In addition to these relatively established data sources, technological developments will continue to generate new sources of consumer data that could offer unique insights into consumer behaviour.

For example, radio-frequency identification allows unique tags to be attached to items and tracked remotely. This technology is being exploited in new ways by applications such as ‘smart keys’, toll passes, and ‘touch and go’ automatic payments. These can provide real-time data on customer purchases and stock levels, and track customer movements in a store.

Another rapidly growing technology is web scraping and indexing software that extracts information from websites. This can be used to create a user footprint of a consumer’s web activity. It can also be paired with sentiment analysis to determine consumer opinion from blogs or other online sources.

More embryonic examples include a new trend known as the ‘quantified self’. Equipment capable of monitoring our physical activity and well-being is becoming smaller and cheaper. As a result there are a growing number of consumers measuring things like their heart rate, movements, sleep patterns, calorie consumption and intake, and consequently generating a new stream of personal data. The applications of this are in their infancy but there are commercial opportunities in knowing whether individual consumers didn’t have a good sleep, are unusually tired, or have consumed beyond their natural calorie intake.

**Competing to gain better understanding of customers**

While the breadth of digital data and its sources may seem disparate, companies such as Google, Facebook and Tesco have identified clear benefits from accessing and utilising data across a range of consumer activities. Through new product launches and acquisitions these companies are building a stockpile of customer data which will form the backbone of future growth ambitions.

Starting with Internet search, Google has expanded its product offerings (largely through an acquisition strategy) and, as seen in Figure 1.2 and Figure 1.3, each new product provides the company with new digital data and insights across almost the full breadth of consumer activity. However, Google’s launch of ‘+1’ is a direct response to the popularity of Facebook’s ‘Like’ button, and the potential of people offering up their own consumer preferences specific to any piece of online content; movie clips, music, advertisements, brands, or personal comments on social networking sites or blogs. This level of granularity and volume has never before been available across such a range of content, previously captured only by ad hoc and low-volume focus group research. Google saw how this data could be linked to individual demographics to build up highly predictive models of consumer preferences which could be fed into a new form of web search based on preferences of consumers and friends.

Google’s competitive advantage in search was built by delivering the most relevant search response and advertisements but the company identified data from the ‘Like’ button as a potential threat and acted fast to capture its own share of this data and protect its future competitiveness.

For businesses with less mature data availability, technological developments are offering new sources of digital data with rich potential but which needs to be protected. Energy retailers in the UK are planning to roll out smart energy meters to every home and business in the country, and these devices will, for the first time, provide detailed daily data on consumer energy usage, both at a household level and potentially at a household appliance level. This data will provide unique insights not just for energy retailers but for a range of other companies such as household appliance manufacturers or microgeneration equipment providers. This will also be energy retailers’ main source of detailed consumer data, although the details of ownership and access to this data are still being debated by industry regulators and energy suppliers. As organisations look to converge multiple data sources there is a risk to energy suppliers that other organisations may enter the smart data market and capture this potentially rich asset.
Digital data opportunities  Customer digital thought leadership

Figure 1.2: Heatmap of consumer data availability

- Data from Google’s Android operating systems offers insights into mobile usage and social habits.
- Google Search provides insight into consumers’ online interests and trends over time.
- Google’s acquisition of mobile payments provider, Zelware, offers insight into consumer purchases combined with location information through mobile devices.
- Google Maps provides information on consumers’ locations and travel patterns.

<table>
<thead>
<tr>
<th>Organizations</th>
<th>Social networking</th>
<th>Mobile device usage</th>
<th>Digital entertainment</th>
<th>Digital consumer data</th>
<th>Financial</th>
<th>Energy</th>
<th>Retail</th>
<th>Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google</td>
<td>Gmail</td>
<td>Android phones</td>
<td>YouTube</td>
<td>Mobile payment</td>
<td>Google Powermeter cancelled</td>
<td>Google Analytics (can track users from search to retail pages)</td>
<td>Google maps and navigation</td>
<td></td>
</tr>
<tr>
<td>Facebook</td>
<td>Leading social networking site</td>
<td>Facebook mobile app</td>
<td>‘Like’ button applied to digital content</td>
<td>Shopping on Facebook corporate sites</td>
<td>Petrol stations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supermarket</td>
<td>Supermarket mobile (small customer base)</td>
<td>Clubcard/transactions provide disposable income</td>
<td>Stores, clubcard data, online store</td>
<td>Store locations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy retailer</td>
<td></td>
<td></td>
<td></td>
<td>Smart meter data &amp; data convergence with other data sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile network operator</td>
<td>Large mobile base</td>
<td>Downloads of apps, mp3s, movie clips</td>
<td>Mobile payment</td>
<td>Mobile high street stores</td>
<td>Location through mobile signal</td>
<td>Maps and navigation apps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home broadband and TV provider</td>
<td>Virgin Group</td>
<td>On-demand TV/movies</td>
<td>Virgin Group</td>
<td>Virgin Group, travel website</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key
- Deep knowledge of customer behaviour
- Some information available but not market leading
- No data available

Figure 1.3: Examples of mergers and acquisitions capturing new data sources

Recent mergers and acquisitions and market diversification point to a growing trend by major companies looking to own vital sources of consumer data as a platform for future competitive advantage:

<table>
<thead>
<tr>
<th>Year</th>
<th>Acquisition/Product Launch</th>
<th>Available Data</th>
<th>Insight Potential From Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>Google acquires Aardvark, social media search software</td>
<td>Social networking/blogs</td>
<td>Tracks consumer sentiment and comments for brands/products/services</td>
</tr>
<tr>
<td>2010</td>
<td>Google acquires Zetawire, NFC mobile payment service</td>
<td>Finance, retail transactions</td>
<td>Provides insight into consumer purchases combined with location information through mobile device</td>
</tr>
<tr>
<td>2010</td>
<td>Facebook launches ‘Like’ button</td>
<td>Web preferences of products/services</td>
<td>Provides real-time insight into customer preferences of web content such as product or brand pages or campaigns, issues, news stories etc.</td>
</tr>
<tr>
<td>2011</td>
<td>Microsoft acquires Skype, VoIP communications provider</td>
<td>Contacts and calls/messages made over the Internet</td>
<td>Social interactions of 560 million users</td>
</tr>
<tr>
<td>2011</td>
<td>Vodafone to launch mobile payment</td>
<td>Finance, retail transactions</td>
<td>UK launch using software such as Google’s Zetawire will potentially provide data to both parties on consumer retail habits</td>
</tr>
<tr>
<td>2011</td>
<td>Google launches ‘+1’ button</td>
<td>Web preferences of products/services</td>
<td>Rival to Facebook’s ‘Like’ button with similar insight potential in preferences of web content</td>
</tr>
</tbody>
</table>

There are clearly a multitude of rich digital sources of consumer data. The quantity of consumer data will continue to expand with technological advances. However, the challenge for businesses lies in how to harness, make sense of, and use this information to generate some form of competitive advantage. This is explored in the following section.
Transforming digital data into corporate value

Delivering a step change in relevance

New sources of consumer data can ultimately provide businesses with new information about customers’ preferences and behaviours. If these data sources can be accessed, analysed and converted into insight on consumer behaviour, then Ernst & Young believes businesses will be able to deliver improved key performance metrics across the business by making a step change in the relevance of offers and services. Ernst & Young has identified four key stages in utilising digital data to generate value. At each of these stages, businesses need to make decisions about what they want to do with the data. However, overriding all of these considerations is the need for data to support their business strategy, rather than being a separate activity.

Step 1: Identify and capture potential data opportunities

The key challenge for companies here is to identify which potentially rich new data sources are relevant to their business. For example, if a company’s main strategy is to be the best at customer service in its industry sector, then it should focus on digital data sources that show how customers feel about their interactions with customer service, such as customer comments on social networks or forums.

Once a company has identified the kind of data that supports its strategy, the next step is to work out how this data can be captured. This could be directly, through new product launches or technological innovation, or indirectly, through a partnership or as part of a trade deal. For example, a content provider could access data from online retailers.

Step 2: Generate insight from data

The aim here is to use digital data to help understand customer behaviour. For example, why, when how and with what, do a company’s customers consume its products? What do they think about these products, and who do they tell?

In order to generate insight, companies first need to consider whether they can store the potentially high volumes of new digital data they have decided to capture. Then they need to ask themselves whether their internal analytical capabilities are sufficient to turn the data into actionable insight. If not, they need to decide whether this capability should be developed in-house or outsourced through a partner, as Tesco’s did with marketing data specialist Dunnhumby, now a wholly-owned Tesco subsidiary.

Step 3: Use insight to improve relevance

The next stage is where businesses can really add value, by identifying how the insight generated can be used to increase the relevance of a company’s offers and interactions with customers. These activities could relate to products and services, channels, messages, content, timing and service/problem solving. A key enabler here is to have the necessary processes and systems in place to disseminate insights to the relevant teams.

Step 4: Realise business benefits

Using digital data to improve the relevance of offerings has the potential to deliver higher sales conversion rates, increased customer spend, more loyal customers and better return on marketing investment. The challenge for companies here is to make sure they can measure any improvements in their business performance to justify their investment in harnessing digital data sources.
To examine in more detail how businesses can generate value from digital data we will explore two potentially rich sources of consumer insight in the following sections: social media and real-time location data.
Social media analytics – real-time customer research

Until now, consumer word-of-mouth has been an untraceable part of consumer behaviour. However, many consumers are now constantly connected through social networking tools, and the posts and conversations which take place online provide businesses with a valuable new insight into what their customers are saying about them.

Identifying and capturing data

Social analytics tools provide detailed information on what consumers are saying on social media websites about a specific brand, product or service and also on the volume and frequency of these discussions. In addition to consumer comments, it is possible to mine other online sources including blogs, news, YouTube and even photo-sharing sites in order to build a holistic picture of how a brand or product is perceived in the online community.

Generating insight from data

Providing tools to analyse social media data is big business, with acquisitions and new software product launches highlighting the growing competitiveness in this market. For example, Salesforce.com purchased social media analytics software provider, Radian6 for $326m in 2011, Twitter recently acquired BackType, which has developed software to identify trends and key influencers, and established analytics IT providers such as SAS and Infosys have launched software to create a presence in this burgeoning market.

These tools provide businesses with the following main types of consumer insight:

► **Buzz** – what is the volume of comments about a specific brand, product or service? How does this change over time? What is a brand’s share of voice compared to competitors? Who are the key influencers generating the buzz?

► **Sentiment analysis** – are people saying positive or negative things about brands, products or services online?

► **Categories/drivers of comments** – what topics are people discussing? What is driving them to comment online, for example, complaints about a product problem or compliments about advertising?

Producing many of these insights is now straightforward with the capabilities presented by analytics software. However, the real benefit comes in getting beyond the headline statistics to identify the causal effect of the trend and how this can be used by businesses to improve their offerings.

Using insight to improve relevance

*Scan a large volume of online comments and react to customer needs*

Dell is an example of a growing number of businesses putting analysis of social media comments at the core of their customer service function. In December 2010, Dell opened its dedicated Social Media Listening Command Centre to scan more than 22,000 daily web posts plus Twitter comments relating to Dell and to identify problems customers are having with products or suggestions for product improvements. Dell also has a dedicated team, @DellCares, to respond directly to consumers to solve their issues through social media.

Virgin Media is also utilising social media data to improve customer service by setting up a dedicated ‘tweam’, which monitors Twitter for customer issues then reaches out to individuals through Twitter or email to solve issues such as broadband installation or connection.

Monitoring and responding to social media comments in this way delivers a more personalised and relevant consumer experience. For example, in the ‘old world’, companies have to wait for calls to come into customer service centres before they can resolve problems faced by customers. In the ‘new world’ of social media, they can respond proactively to customers posting comments on social media sites. In the old world, customers wanting to contact a company are restricted to using the channels provided by that company, usually call centres. In the new world, they can use the platform of their choice – Twitter, Facebook and so on (see Figure 2.2).

Gartner estimates that in the next two years, 30% of large companies will extend their online community activities to include improving customer service, compared to only about 5% in 2010.
Figure 2.2: Benefits of social media analytics for customer services

<table>
<thead>
<tr>
<th>Customer benefit</th>
<th>Old-world (call centres, research)</th>
<th>New world (social media analytics)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies respond directly and proactively to customer service issues</td>
<td>Reactive – wait for calls into customer service call centre</td>
<td>Proactive – consumers post social media comments as normal but businesses come to them to resolve issues or discuss queries</td>
</tr>
<tr>
<td>Businesses offer a more convenient channel of interaction, when I’m online, don’t have to hang on hold to call centre</td>
<td>Customers have to use channels provided by the business they want to contact, normally through call centres</td>
<td>Consumers can use platforms of their choice to post comments, (Twitter, Facebook blogs etc.) and then also interact with companies through these preferred channels</td>
</tr>
<tr>
<td>Assess all comments, not just those that make the effort to call up</td>
<td>Only receive complaints or issues – no one will call up to compliment</td>
<td>See all comments covering negative and positive sentiment – it’s easier for people to post a comment on Twitter or Facebook than contact a call centre</td>
</tr>
<tr>
<td>Able to understand reaction of customers at point of usage/communication – will give more truthful opinion of products/services</td>
<td>Limited to call centre size or low volume research focus groups</td>
<td>Use powerful software to analyse all available comments</td>
</tr>
</tbody>
</table>

**Identify and target key influencers**

With around 75% of Twitter content generated by just 5% of users⁶, businesses can use social media analytics to identify these ‘key influencers’, who often start online conversations and share content, which is then forwarded on by others. These individuals can then be targeted to trigger positive PR. For example, Interflora launched a campaign to identify key influencers who appeared to need cheering up and then sent them flowers⁷. Cosmetic retailer BioTherm Beauty applied a similar technique, using social media analytics to identify consumers who appeared from their online comments to be tired and offering free health and beauty products as a random act of kindness⁸.

Targeting key influencers with flowers or other random acts of kindness gives companies such as Interflora the potential to maximise the visibility of any positive comments that are made by the targeted user.

**Forecast and adapt marketing campaigns to level of buzz**

In addition to looking retrospectively at social media trends, this data can be used to predict future levels of buzz or even the future success of product or campaign launches. Research by HP Labs demonstrated the potential to analyse the rate and sentiment of Twitter comments (tweets) about specific movies in the run-up to the film’s release and found a strong correlation with box office revenues. HP Labs also found that social media data outperformed the trusted industry standard metric of Hollywood Stock Exchange to predict financial success for movies⁹.

Twitter has also been used to predict the outcomes of parliamentary elections in the UK and proved to be more accurate than YouGov research polls. The Twitter forecast results had an average error margin of 1.75% – compared to 2.25% for YouGov¹⁰.

Using social media data to create models to predict actual consumer behaviour offers marketing departments the potential to adapt campaigns to maximise the return on investment. The scale of campaigns and the timing of their launch can be adapted by creating a model that reacts to changes in social media comments. Apple has traditionally been very successful in timing the launch of new products after building up consumer excitement and PR. Social media forecasting can be used to predict the optimal time to launch a product, when consumer anticipation and buzz is at its height, thereby maximising the chances of a sales and campaign return on investment.
Realising business benefits
Monitoring and responding to social media can help businesses to respond faster to customer issues, and using an online response can reduce the number of inbound calls to service teams, in turn reducing costs. Migrating customer service online for targeted groups of customers has helped Virgin Media to improve its customer satisfaction and brand measures such as Net Promoter Score (NPS)\(^1\).

Meanwhile, Interflora’s targeting of key influencers, followed by a roll-out of new services to these individuals, has driven increased awareness of the brand and also helped to boost online sales through association with social media.

Adapting marketing campaigns using predictive models of social media buzz to determine whether a campaign should be scaled up or down, can potentially save businesses money when the level of demand is insufficient, or deliver higher than anticipated sales by launching when social media buzz is at its peak.

Location, location, location — the emergence of location-based marketing
Location-based advertising is an emerging form of advertising that identifies a potential customer’s physical location though location-tracking technology on mobile devices and then targets them with an advertisement relevant to their physical location. According to research firm Strategy Analytics, this quickly growing area is expected to generate $10bn in advertising by 2016\(^2\).

Identifying and capturing data
The rapid adoption of smartphones and tablet computers (36% of the UK population owns a smartphone and 5% own a tablet device) is enabling people to be connected on the move\(^1\). Applications such as Foursquare, Facebook Places, and Google Search read the location data transmitted by mobile devices through GPS signal or wifi routers, and, in Google’s case, through Google ID towers, IP address, Google Maps viewpoints and historical searches. This allows companies to locate and interact with consumers in real-time at key moments in their decision making process, enabling marketing communications to be tailored.

Generating insight from data
Historically, enticing consumers into stores or restaurants relied on a combination of off-line awareness and interest-building with storefront promotions. However, by using location data, targeted personalised messages can be sent direct to mobile devices, generating interest in a more personal way. For example, when a customer is showing interest in, then considering buying a product, the company could target them with a special offer sent to their mobile device (see Figure 2.3).

Advertisers are now beginning to use a technique called ‘geo-fencing’ which creates a virtual radius (usually one to two miles) around a store and, using a customer’s real-time location data, sends offers or information direct to their device if they enter this zone. This data can be tracked over time to build a picture of the places that a consumer frequents or those places that are one-off visits.
Using the insight to improve relevance

Location data is especially powerful when combined with existing types of consumer data such as demographics and previous purchase history, and linking multiple data sources to tailor offers could drive up conversion rates even further. For example, a digital system could recognise that you had browsed online for an item and could send you a deal on that specific product when you walk past a store selling it.

JiWire is a real-time, location-based marketing company that does just that. It has access to data on customers connecting to 30,000 wireless Internet access points across the US, such as in coffee shops or airports. JiWire uses the location of wireless connections combined with the demographic profile of consumers within that area (through wifi registration) to offer tailored advertisements for local companies as they connect to wifi.

There are many applications of location data and in response new channels are emerging to help businesses reach customers at the most relevant time. For example, O2 uses its mobile data to offer geo-fencing capabilities to Starbucks and L'Oreal, setting a half-mile radius across 1,500 locations in the UK. Customers receive an SMS with a buy-one-get-one-free offer for L'Oreal products when they walk near a specific store, or a discount on a coffee when they walk past a Starbucks coffee shop.

Realising business benefits

_Improved customer conversion rates_

Due to the increased relevance of the message, research indicates that location-based advertising yields higher conversion rates than traditional advertising. Geo-fencing advertising has also been used across a range of North Face stores, resulting in a 65% take-up rate of a discount offer. Of a sample of customers receiving these offers, 79% said the communications made them more likely to revisit the store.

FedEx used JiWire to run targeted ads across 2,500 locations, promoting its local stores and services. As a result it saw a 119% uplift in responses compared to those for non-targeted services. According to JiWire’s Q4 2010 report, 20% of respondents visited a store after seeing a relevant location-based advertisement, and 57% admitted to being more likely to visit a store after seeing an advertisement that was relevant to their location.

_Increased customer loyalty_

These two in-depth examples provide a snapshot of the potential of digital data to drive value creation, but there are a range of other data opportunities which could increase relevance of offerings and experiences. However, the act of turning data into insight and into marketing activity throws up questions over consumer privacy and protection of personal information. These questions are considered in the following section.
Playing by the rules

Privacy is a balancing act between invasion and convenience

What one customer considers a convenient feature, another may consider an invasion of personal privacy.

From a commercial point of view, companies with access to these data sources need to strike a balance between making the most of their customer data to generate value, and ensuring that they don't scare customers away by taking this too far and invading customer privacy.

To complicate the matter further, it is very difficult to anticipate the consequences of releasing customer data, even when that data is not obviously personal. For example, in 2006 Netflix released its data set of anonymous reviews to support a competition to design an algorithm for predicting user ratings for films. This would allow Netflix to more accurately suggest films to its users. However, the competition was heavily criticised, and in 2007 researchers were able to identify particular users from the data18. Netflix was sued by an anonymous user in 2009, and the following year it cancelled the planned second competition19.

Privacy should be considered at each stage of the process, from identifying and capturing data, to using the insights gained to increase the relevance of services and offerings.

Identifying and capturing data

When it goes too far

In May of 2010, a global research firm, a private media research firm in New York, was found to be scraping personal information from a mood disorders blog. A global research firm sold the information on to its clients, such as major drug producers, who used the data to gain consumer insight about their products. A global research firm later complied with a mood disorders blog request to stop data scraping and quarantine the data20. This isn’t an isolated case: according to the management consulting firm Winterberry Group LLC21, marketers spent $410m on data from online sources in 2009, and this amount is expected to increase to $840m by 2012.

Digital data violations aren’t limited to websites. GPS technology allows for an individual’s location to be monitored remotely. Researchers recently discovered that unencrypted location data is stored on some smart phones. Despite the smartphone manufacturer’s original useful applications for this data, unhappy consumers took legal action on the grounds of violation of privacy.

In 2010, The Wall Street Journal analysed the 50 most visited websites22 in the USA and assigned each site an exposure index, based on the number of cookies and other trackers the site assigned and how exposed the consumer’s data was. Twenty-nine of the 50 sites were given an exposure rating of ‘Medium’ or above. Sixty per cent of the report’s readers described themselves as ‘very alarmed’ about the advertising companies tracking their behaviour across the web.
Considerations while collecting data
► Be honest about what data is being collected and how the data will be used.
► Make customers aware that they are participating in a data collection programme and give them an easy way out; for example, Facebook Places and Google Location have an opt-in, rather than an opt-out, option.

Generating insight from data

When it goes too far
Beyond collecting data, care must also be taken to use the data appropriately in a way that avoids the ‘creepiness factor’. This is roughly defined as piecing together customer data from various sources in a legal way that nevertheless ‘creeps out’ the targeted customer by generating unexpected insights. For example, readers who access the technology blog GigaOM through Facebook may be surprised to see articles their friends or family mentioned appear as a suggested reading on GigaOM. By linking to Facebook, the blog can go beyond individual customisation and offer suggestions based on the preferences of the user’s social network.

Based on current trends, it isn’t difficult to imagine a world where you receive hundreds of unsolicited personalised digital marketing messages a day. Imagine walking down the street and instantly receiving marketing in the form of emails, texts, tweets, application-specific messages and even customised 3D videos as you walk by a storefront. This information overload would be likely to discourage consumers from purchasing anything.

Considerations when using customer data
► Give customers full control over which data collection programmes they are involved in and clearly state what the data could be used for.
► Alert customers to any changes in your data policy quickly and in plain language.
► Be careful not to annoy your customers with too many customised messages.
► Provide a “why am I getting this message?” service to your customers and clearly explain who the customer originally authorised to have their details and how your businesses obtained.
► Sense-check your advertising strategies by asking yourself how you’d feel if you or your family were targeted by a particular campaign.
Conclusion

In the past few years, there has been an explosion in the volume of digital data created by consumers as they go about their daily lives, from making comments on Facebook to shopping and banking online. There are clear business benefits to be gained from capturing this data and using it to gain insights into customer behaviour – insights that can be used to make a company’s offerings more relevant to its customers.

Ernst & Young believes that businesses that want to reap these benefits need to have a clear understanding of what data is needed to support their business model, how they can capture it and what they should do with it. They need to be aware of the four key steps required to utilise digital data sources, and of the challenges and considerations that each step entails.

Businesses must also be aware of the pitfalls that can arise from the use of digital data – while customers are happy for products and services to be more relevant to their lives, they are afraid of losing personal data or having their privacy invaded. Many companies have faced legal challenges over what are seen as digital data violations.

The businesses that will benefit most from the huge opportunities offered by digital data will be those that can steer clear of these pitfalls while having a clear vision of how these new sources of data can transform their business.

How is Ernst & Young positioned to help?

Please contact Yunus Ozler (yozler@uk.ey.com, 020 7951 4524), Jonathan Carr (jcarr2@uk.ey.com, 020 7951 5640) and Melanie Roha (mroha@uk.ey.com, 020 7951 8273) at Ernst & Young if you are interested in further exploring our digital offerings. We would be happy to assist your organisation in identifying digital opportunities across customers, suppliers, investors, leadership and employees.

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The digitisation of everything

Social media

Digital utilities

For more information about our views on Digital and to see more, please contact your local Ernst & Young office or visit www.ey.com