**Amazon Case Study**

Why a case study on Amazon? Surely everyone knows about who Amazon are and what they do? Yes, well that's maybe true, but this case goes beyond the surface to review some of the 'insider secrets' of Amazon's success.

Like eBay, Amazon.com was born in 1995. The name reflected the vision of Jeff Bezos, to produce a large scale phenomenon like the Amazon river. This ambition has proved justified since just 8 years later, Amazon passed the $5 billion sales mark – it took Wal-Mart 20 years to achieve this.

By 2008 Amazon was a global brand with other 76 million active customers accounts and order fulfillment to more than 200 countries. Despite this volume of sales, at December 31, 2007 Amazon employed approximately 17,000 full-time and part-time employees.

In September 2007, it launched Amazon MP3, a la carte DRM-free MP3 music downloads, which now includes over 3.1 million songs from more than 270,000 artists.

**Amazon Vision & strategy**

In their 2008 SEC filing, Amazon describe the vision of their business as to:

"Relentlessly focus on customer experience by offering our customers low prices, convenience, and a wide selection of merchandise."

The vision is to offer Earth's biggest selection and to be Earth's most customer-centric company. Consider how these core marketing messages summarising the Amazon online value proposition are communicated both on-site and through offline communications.

Of course, achieving customer loyalty and repeat purchases has been key to Amazon's success. Many dot-coms failed because they succeeded in achieving awareness, but not loyalty. Amazon achieved both. In their SEC filing they stress how they seek to achieve this. They say:

"*We work to earn repeat purchases by providing easy-to-use functionality, fast and reliable fulfillment, timely customer service, feature rich content, and a trusted transaction environment.*

*Key features of our websites include editorial and customer reviews; manufacturer product information; Web pages tailored to individual preferences, such as recommendations and notifications; 1-Click® technology; secure payment systems; image uploads; searching on our websites as well as the Internet; browsing; and the ability to view selected interior pages and citations, and search the entire contents of many of the books we offer with our "Look Inside the Book" and "Search Inside the Book" features. Our community of online customers also creates feature-rich content, including product reviews, online recommendation lists, wish lists, buying guides, and wedding and baby registries.*"

In practice, as is the practice for many online retailers, the lowest prices are for the most popular products, with less popular products commanding higher prices and a greater margin for Amazon.

Free shipping offers are used to encourage increase in basket size since customers have to spend over a certain amount to receive free shipping. The level at which free-shipping is set is critical to profitability and Amazon has changed it as competition has changed and for promotional reasons.

Amazon communicate the fulfillment promise in several ways including presentation of latest inventory availability information, delivery date estimates, and options for expedited delivery, as well as delivery shipment notifications and update facilities.

This focus on customer has translated to excellence in service with the 2004 American Customer Satisfaction Index giving Amazon.com a score of 88 which was at the time, the highest customer satisfaction score ever recorded in any service industry, online or offline.

Round (2004) notes that Amazon focuses on customer satisfaction metrics. Each site is closely monitored with standard service availability monitoring (for example, using Keynote or Mercury Interactive) site availability and download speed. Interestingly it also monitors per minute site revenue upper/lower bounds – Round describes an alarm system rather like a power plant where if revenue on a site falls below $10,000 per minute, alarms go off! There are also internal performance service-level-agreements for web services where T% of the time, different pages must return in X seconds.

**Amazon Customers**

Amazon defines what it refers to as three consumer sets customers, seller customers and developer customers.

There are over 76 million customer accounts, but just 1.3 million active seller customers in it's marketplaces and Amazon is seeking to increase this. Amazon is unusual for a retailer in that it identifies "developer customers" who use its Amazon Web Services, which provides access to technology infrastructure such as hosting that developers can use to develop their own web services.

Members are also encouraged to join a loyalty programme, Amazon Prime, a fee-based membership program in which members receive free or discounted express shipping, in the United States, the United Kingdom, Germany and Japan.

**Competition**

In its SEC (2005) filing Amazon describes the environment for our products and services as 'intensely competitive'. It views its main current and potential competitors as:

- 1) physical-world retailers, catalog retailers, publishers, vendors, distributors and manufacturers of our products, many of which possess significant brand awareness, sales volume, and customer bases, and some of which currently sell, or may sell, products or services through the Internet, mail order, or direct marketing;
- (2) Other online E-commerce sites;
- (3) A number of indirect competitors, including media companies, Web portals, comparison shopping websites, and Web search engines, either directly or in collaboration with other retailers; and

- (4) Companies that provide e-commerce services, including website development; third-party fulfillment and customer-service.

It believes the main competitive factors in its market segments include "selection, price, availability, convenience, information, discovery, brand recognition, personalized services, accessibility, customer service, reliability, speed of fulfillment, ease of use, and ability to adapt to changing conditions, as well as our customers' overall experience and trust in transactions with us and facilitated by us on behalf of third-party sellers".

For services offered to business and individual sellers, additional competitive factors include the quality of our services and tools, their ability to generate sales for third parties we serve, and the speed of performance for our services.

## From Auctions to marketplaces

Amazon auctions (known as zShops) were launched in March 1999, in large part as a response to the success of eBay. They were promoted heavily from the home page, category pages and individual product pages. Despite this, a year after its launch it had only achieved a 3.2% share of the online auction compared to 58% for eBay and it only declined from this point.

Today, competitive prices of products are available through third-party sellers in the 'Amazon Marketplace' which are integrated within the standard product listings. The strategy to offer such an auction facility was initially driven by the need to compete with eBay, but now the strategy has been adjusted such that Amazon describe it as part of the approach of low-pricing.

Although it might be thought that Amazon would lose out on enabling its merchants to sell products at lower prices, in fact Amazon makes greater margin on these sales since merchants are charged a commission on each sale and it is the merchant who bears the cost of storing inventory and fulfilling the product to customers. As with eBay, Amazon is just facilitating the exchange of bits and bytes between buyers and sellers without the need to distribute physical products.

## How 'The Culture of Metrics' started

A common theme in Amazon's development is the drive to use a measured approach to all aspects of the business, beyond the finance. Marcus (2004) describes an occasion at a corporate 'boot-camp' in January 1997 when Amazon CEO Jeff Bezos 'saw the light'. 'At Amazon, we will have a Culture of Metrics', he said while addressing his senior staff. He went on to explain how web-based business gave Amazon an 'amazing window into human behaviour'. Marcus says: 'Gone were the fuzzy approximations of focus groups, the anecdotal fudging and smoke blowing from the marketing department.

A company like Amazon could (and did) record every move a visitor made, every last click and twitch of the mouse. As the data piled up into virtual heaps, hummocks and mountain ranges, you could draw all sorts of conclusions about their chimerical nature, the consumer. In this sense, Amazon was not merely a store, but an immense repository of facts. All we needed were the right equations to plug into them'.

James Marcus then goes on to give a fascinating insight into a breakout group discussion of how Amazon could better use measures to improve its performance. Marcus was in the Bezos group, brainstorming customer-centric metrics. Marcus (2004) summarises the dialogue, led by Bezos:

"First, we figure out which things we'd like to measure on the site", he said.

"For example, let's say we want a metric for customer enjoyment. How could we calculate that?"

"There was silence. Then somebody ventured: "How much time each customer spends on the site?"

"Not specific enough", Jeff said.

"How about the average number of minutes each customer spends on the site per session" someone else suggested. "If that goes up, they're having a blast".

"But how do we factor in purchase?" I **[Marcus]** said feeling proud of myself.

"Is that a measure of enjoyment"?

"I think we need to consider frequency of visits, too", said a dark-haired woman I didn't recognise.

"Lot of folks are still accessing the web with those creepy-crawly modems. Four short visits from them might be just as good as one visit from a guy with a T-1. Maybe better'.

"Good point", Jeff said. "And anyway, enjoyment is just the start. In the end, we should be measuring customer ecstasy"

It is interesting that Amazon was having this debate in about the elements of RFM analysis (described in Chapter 6 of Internet Marketing), 1997, after already having achieved $16 million of revenue in the previous year. Of course, this is a miniscule amount compared with today's billions of dollar turnover. The important point was that this was the start of a focus on metrics which can be seen through the description of Matt Pounds work later in this case study.

**From human to software-based recommendations**

Amazon has developed internal tools to support this 'Culture of Metrics'. Marcus (2004) describes how the 'Creator Metrics' tool shows content creators how well their product listings and product copy are working. For each content editor such as Marcus, it retrieves all recently posted documents including articles, interviews, booklists and features. For each one it then gives a conversion rate to sale plus the number of page views, adds (added to basket) and repels (content requested, but the back button then used). In time, the work of editorial reviewers such as Marcus was marginalised since Amazon found that the majority of visitors used the search tools rather than read editorial and they responded to the personalised recommendations as the matching technology improved (Marcus likens early recommendations techniques to 'going shopping with the village idiot').

**Experimentation and testing at Amazon**

The 'Culture of Metrics' also led to a test-driven approach to improving results at Amazon. Matt Round, speaking at E-metrics 2004 when he was director of personalisation at Amazon describes the philosophy as 'Data Trumps Intuitions'. He explained how Amazon used to have a lot of arguments about which content and promotion should go on the all important home page or category pages. He described how every category VP wanted top-center and how the Friday meetings about placements for next week were getting 'too long, too loud, and lacked performance data'.

But today 'automation replaces intuitions' and real-time experimentation tests are always run to answer these questions since actual consumer behaviour is the best way to decide upon tactics.

Marcus (2004) also notes that Amazon has a culture of experiments of which A/B tests are key components. Examples where A/B tests are used include new home page design, moving features around the page, different algorithms for recommendations, changing search relevance rankings. These involve testing a new treatment against a previous control for a limited time of a few days or a week. The system will randomly show one or more treatments to visitors and measure a range of parameters such as units sold and revenue by category (and total), session time, session length, etc. The new features will usually be launched if the desired metrics are statistically significantly better. Statistical tests are a challenge though as distributions are not normal (they have a large mass at zero for example of no purchase) There are other challenges since multiple A/B tests are running every day and A/B tests may overlap and so conflict. There are also longer-term effects where some features are 'cool' for the first two weeks and the opposite effect where changing navigation may degrade performance temporarily. Amazon also finds that as its users evolve in their online experience the way they act online has changed. This means that Amazon has to constantly test and evolve its features.

**Amazon.com Technology**

It follows that the Amazon technology infrastructure must readily support this culture of experimentation and this can be difficult to achieved with standardised content management. Amazon has achieved its competitive advantage through developing its technology internally and with a significant investment in this which may not be available to other organisations without the right focus on the online channels.

As Amazon explains in SEC (2005) 'using primarily our own proprietary technologies, as well as technology licensed from third parties, we have implemented numerous features and functionality that simplify and improve the customer shopping experience, enable third parties to sell on our platform, and facilitate our fulfillment and customer service operations. Our current strategy is to focus our development efforts on continuous innovation by creating and enhancing the specialized, proprietary software that is unique to our business, and to license or acquire commercially-developed technology for other applications where available and appropriate. We continually invest in several areas of technology, including our seller platform; A9.com, our wholly-owned subsidiary focused on search technology on www.A9.com and other Amazon sites; web services; and digital initiatives.'

Round (2004) describes the technology approach as 'distributed development and deployment'. Pages such as the home page have a number of content 'pods' or 'slots' which call web services for features. This makes it relatively easy to change the content in these pods and even change the location of the pods on-screen. Amazon uses a flowable or fluid page design unlike many sites which enables it to make the most of real-estate on-screen.

Technology also supports more standard e-retail facilities. SEC (2005) states: 'We use a set of applications for accepting and validating customer orders, placing and tracking orders with suppliers, managing and assigning inventory to customer orders, and ensuring proper shipment of products to customers. Our transaction-processing systems handle millions of items, a number of different status inquiries, multiple shipping addresses, gift-wrapping requests, and multiple shipment methods. These systems allow the customer to choose whether to receive single or several shipments based on availability and to track the progress of each order. These applications also manage the process of accepting, authorizing, and charging customer credit cards.'

## Data Driven Automation

Round (2004) said that 'Data is king at Amazon'. He gave many examples of data driven automation including customer channel preferences; managing the way content is displayed to different user types such as new releases and top-sellers, merchandising and recommendation (showing related products and promotions) and also advertising through paid search (automatic ad generation and bidding).

The automated search advertising and bidding system for paid search has had a big impact at Amazon. Sponsored links initially done by humans, but this was unsustainable due to range of products at Amazon. The automated programme generates keywords, writes ad creative, determines best landing page, manages bids, measure conversion rates, profit per converted visitor and updates bids. Again the problem of volume is there, Matt Round described how the book 'How to Make Love Like a Porn Star' by Jenna Jameson received tens of thousands of clicks from pornography-related searches, but few actually purchased the book. So the update cycle must be quick to avoid large losses.

There is also an automated email measurement and optimization system. The campaign calendar used to be manually managed with relatively weak measurement and it was costly to schedule and use. A new system:

- Automatically optimizes content to improve customer experience
- Avoids sending an e-mail campaign that has low clickthrough or high unsubscribe rate
- Includes inbox management (avoid sending multiple emails/week)
- Has growing library of automated email programs covering new releases and recommendations

But there are challenges if promotions are too successful if inventory isn't available.

## Your Recommendations

Customers Who Bought X…, also bought Y is Amazon's signature feature. Round (2004) describes how Amazon relies on acquiring and then crunching a massive amount of data. Every purchase, every page viewed and every search is recorded. So there are now to new version, customers who shopped for X also shopped for… and Customers who searched for X also bought… They also have a system codenamed 'Goldbox' which is a cross-sell and awareness raising tool. Items are discounted to encourage purchases in new categories!

He also describes the challenge of techniques for sifting patterns from noise (sensitivity filtering) and clothing and toy catalogues change frequently so recommendations become out of date. The main

challenges though are the massive data size arising from millions of customers, millions of items and recommendations made in real time.

## Amazon Partnership strategy

As Amazon grew, its share price growth enabled partnership or acquisition with a range of companies in different sectors. Marcus (2004) describes how Amazon partnered with Drugstore.com (pharmacy), Living.com (furniture), Pets.com (pet supplies), Wineshopper.com (wines), HomeGrocer.com (groceries), Sothebys.com (auctions) and Kozmo.com (urban home delivery). In most cases, Amazon purchased an equity stake in these partners, so that it would share in their prosperity. It also charged them fees for placements on the Amazon site to promote and drive traffic to their sites. Similarly, Amazon charged publishers for prime-position to promote books on its site which caused an initial hue-and-cry, but this abated when it was realised that paying for prominent placements was widespread in traditional booksellers and supermarkets. Many of these new online companies failed in 1999 and 2000, but Amazon had covered the potential for growth and was not pulled down by these partners, even though for some such as Pets.com it had an investment of 50%.

Analysts sometimes refer to 'Amazoning a sector' meaning that one company becomes dominant in an online sector such as book retail such that it becomes very difficult for others to achieve market share. In addition to developing, communicating and delivering a very strong proposition, Amazon has been able to consolidate its strength in different sectors through its partnership arrangements and through using technology to facilitate product promotion and distribution via these partnerships. The Amazon retail platform enables other retailers to sell products online using the Amazon user interface and infrastructure through their 'Syndicated Stores' programme.

For example, in the UK, Waterstones (www.waterstones.co.uk) is one of the largest traditional bookstores. It found competition with online so expensive and challenging, that eventually it entered a partnership arrangement where Amazon markets and distributes its books online in return for a commission online. Similarly, in the US, Borders a large book retailer uses the Amazon merchant platform for distributing its products.

Toy retailer Toys R' Us have a similar arrangement. Such partnerships help Amazon extends its reach into the customer-base of other suppliers, and of course, customers who buy in one category such as books can be encouraged to purchase into other areas such as clothing or electronics.

Another form of partnership referred to above is the Amazon Marketplace which enables Amazon customers and other retailers to sell their new and used books and other goods alongside the regular retail listings. A similar partnership approach is the Amazon 'Merchants@' program which enables third party merchants (typically larger than those who sell via the Amazon Marketplace) to sell their products via Amazon. Amazon earn fees either through fixed fees or sales commissions per-unit. This arrangement can help customers who get a wider choice of products from a range of suppliers with the convenience of purchasing them through a single checkout process.

Finally, Amazon has also facilitated formation of partnerships with smaller companies through its affiliates programme. Internet legend records that Jeff Bezos, the creator of Amazon was chatting to someone at a cocktail party who wanted to sell books about divorce via her web site. Subsequently, Amazon.com

launched its Associates Program in July 1996 and it is still going strong. Googling http://www.google.com/search?q=www.amazon.com+-site%3Awww.amazon.com for sites that link to the US site, shows over 4 million pages, many of which will be affiliates. Amazon does not use an affiliate network which would take commissions from sale, but thanks to the strength of its brand has developed its own affiliate programme. Amazon has created a tiered performance-based incentives to encourage affiliates to sell more Amazon products.

**Amazon Marketing communications**

In their SEC filings Amazon state that the aims of their communications strategy are (unsurprisingly) to:

1. Increase customer traffic to our websites
2. Create awareness of our products and services
3. Promote repeat purchases
4. Develop incremental product and service revenue opportunities
5. Strengthen and broaden the Amazon.com brand name.

Amazon also believe that their most effective marketing communications are a consequence of their focus on continuously improving the customer experience. This then creates word-of-mouth promotion which is effective in acquiring new customers and may also encourage repeat customer visits.

As well as this Marcus (2004) describes how Amazon used the personalisation enabled through technology to reach out to a difficult to reach market which Bezos originally called 'the hard middle'. Bezos's view was that it was easy to reach 10 people (you called them on the phone) or the ten million people who bought the most popular products (you placed a superbowl ad), but more difficult to reach those in between. The search facilities in the search engine and on the Amazon site, together with its product recommendation features meant that Amazon could connect its products with the interests of these people.

Online advertising techniques include paid search marketing, interactive ads on portals, e-mail campaigns and search engine optimisation. These are automated as far as possible as described earlier in the case study. As previously mentioned, the affiliate programme is also important in driving visitors to Amazon and Amazon offers a wide range of methods of linking to its site to help improve conversion.

For example, affiliates can use straight text links leading direct to a product page and they also offer a range of dynamic banners which feature different content such as books about Internet marketing or a search box. Amazon also use cooperative advertising arrangements, better known as 'contra-deals' with some vendors and other third parties. For example, a print advertisement in 2005 for a particular product such as a wireless router with a free wireless laptop card promotion will feature a specific Amazon URL in the ad. In product fulfilment packs, Amazon may include a leaflet for a non-competing online company such as Figleaves.com (lingerie) or Expedia (travel). In return, Amazon leaflets may be included in customer communications from the partner brands.

Our Associates program directs customers to our websites by enabling independent websites to make millions of products available to their audiences with fulfillment performed by us or third parties. We pay commissions to hundreds of thousands of participants in our Associates program when their customer referrals result in product sales.

In addition, we offer everyday free shipping options worldwide and recently announced Amazon.com Prime in the U.S., our first membership program in which members receive free two-day shipping and discounted overnight shipping. Although marketing expenses do not include the costs of our free shipping or promotional offers, we view such offers as effective marketing tools.