Econsultancy

Market Data / Supplier Selection / Event Presentations / Best Practice / Template Files / Trends & Innovation

# Ecommerce

## Best Practice Guide

# Ecommerce

## Best Practice Guide

**Published October 2017**



**Econsultancy London**
4th Floor, Wells Point
79 Wells Street
London W1T 3QN
United Kingdom

Telephone:
+44 207 269 1450

http://econsultancy.com
help@econsultancy.com

**Econsultancy New York**
350 7th Avenue, Suite 307
New York, NY 10001
United States

Telephone:
+1 212 971 0630

**Econsultancy Singapore**
20 Collyer Quay
#23-01
Singapore
049319

Telephone:
+65 6653 1911

# Contents

# 1. Introduction

Econsultancy's series of Best Practice Guides have been created for Internet professionals who typically work in marketing or ecommerce roles.

The guides steer readers to ensure that projects and strategies are executed in the right way for optimal results.

Given the continued growth and competitiveness of ecommerce, sections of this guide will be relevant to CEOs and MDs; CMOs and Marketing Directors; FDs and data analysts; brand, content, digital, social, online and ecommerce managers; producers, creatives, and strategists as well as owners in editorial, PR, marketing and customer service departments.

## 1.1. How this guide is structured

We've created this guide so you can use it to either review your existing ecommerce strategy or to help create an ecommerce proposition from scratch. We've also included a multitude of practical tips you can apply to individual aspects to help maximise results.

Most topics in digital marketing are subject to debates about scope: what should and shouldn't be included in coverage, and how each topic fits into the wider picture. Ecommerce, however, seems a bit different. Rather than being a component of digital marketing it *is,* surely, the end game of everything that businesses do online (and a good deal of what not for profit and campaign organisations do too).

To overcome these problems through clarification, this best practice guide will cover the entire customer journey, from when they arrive on a website, to when they've completed a purchase.

All manner of considerations that go into customer acquisition and retention are interwoven into ecommerce, and if ecommerce is to be treated as a department within a business, then there are myriad other functions that need to be in sync with it.

This guide will mention these areas too, whether it's about the need for consistency of an organisation's offering between online and in-store retail, or the inescapable interdependence between ecommerce and order fulfilment capabilities (sometimes leading to ecommerce managers having direct oversight of logistics and warehousing too). But in order to have a clear focus, a line must be drawn, and from when people arrive to when they've completed a purchase is where we've drawn it.

**My role includes overseeing everything that happens in the warehouse**

"But I'm also in charge of development and infrastructure, which is the things people can't see like websites, servers, and security.

"I have a fair amount of hands-on involvement when things go wrong because I have the experience. Most of what I'm trying to do of course is the strategy, the long-term goals."

**Paula Abasolo, Head of Operations and Infrastructure, Dobell**

## 1.2. About Econsultancy

Econsultancy's mission is to help its customers achieve excellence in digital business, marketing and ecommerce through research, training and events.

Founded in 1999, Econsultancy has offices in New York, London and Singapore.

Econsultancy is used by over 600,000 professionals every month. Subscribers get access to research, market data, best practice guides, case studies and elearning – all focused on helping individuals and enterprises get better at digital.

The subscription is supported by digital transformation services including digital capability programmes, training courses, skills assessments and audits. We train and develop thousands of professionals each year as well as running events and networking that bring the Econsultancy community together around the world.

Subscribe to Econsultancy today to accelerate your journey to digital excellence.

Call us to find out more:

- **New York**: +1 212 971 0630
- **London**: +44 207 269 1450
- **Singapore**: +65 6653 1911

## 1.3. About the author

Steffan Aquarone is a UK digital entrepreneur and speaker whose experiences range from payments to politics. He has consulted and trained for big brands and spoken around the world on innovation, entrepreneurship and digital marketing.

He now leads Econsultancy's Best Practice Report programme, as well as delivering training to clients around the world.

- linkedin.com/in/steffanaquarone
- steffan.aquarone@econsultancy.com
- @steffanaquarone

## 1.4. Key industry contributors

**Isabel Mack** has held senior ecommerce roles in Game Group, Wiggle, Waitrose, and now Iglu.com where she is Chief Product Owner (eCommerce). She has contributed to virtually every section of the report, providing insight, anecdotes, theory and feedback as well as case studies and numerous references. Her input has drawn on ten years of experience in bridging the gap between IT and business to deliver digital transformation, specialising in ecommerce.

**Paula Abasolo** heads up operations and infrastructure at Dobell, a growing and thriving menswear business located on the south coast of England. Having worked in ecommerce for more than seven years she has a wide-ranging, hands-on role.

**David Kohn** is Customer & Ecommerce Director at Heal's and brings a rare combination of board-level online and offline commercial experience to a business that has been in retail since 1810.

**Steve Mills** saw Wiggle.com go from £10m to £100m turnover, leaving as head of ecommerce to turn what had been his and his wife's niche weekend project, Net Curtains Direct, into the biggest site in its market. Steve's Green Snow Online Fulfillment helps cycling business trade online.

# 2. Foreword from the author

Discussions about ecommerce in the past few years have been dominated by references to Amazon: the $200bn company that's grown over 20 years from being a pure play bookseller to buying a health food supermarket chain, becoming a courier network and as of September 2017, expanding into restaurant delivery.

It turns out I rarely buy non-perishable products other than on Amazon – a notable exception being in December last year, for a present on someone's Christmas wish list that was so niche it wasn't available there. Well done, Axminster Tools and Machinery for optimising its Google shopping listings for "12 - 4mm Fisch Deburring Countersink".

Is there anything left to talk about other than Amazon, I wondered, in an Ecommerce Best Practice report? Is Amazon now to online retail what Google is to search – its dominant position increasingly locked in by logistics?

The emergence of new business models – within and outside of Amazon's tentacles – suggests there is. I, for example, buy my clothes from Thread.com, which offers me personalised style advice and a regular selection of outfits for me to choose from: a clear win for customer retention. Many of the Amazon products I order are actually on subscription, something that any ecommerce retailer could choose to offer and indeed niche ecommerce businesses already do supply everything from shavers to spices for a monthly fee.

In all these cases the rules of ecommerce best practice are hugely relevant, as they are for retailers who are using alternative routes to market but still need to convert customers back on their centralised ecommerce sites.

Further speculation about the future of ecommerce – what the competitive landscape, business models and disruption opportunity will be – will have to be saved for a separate report on future trends. But it would be remiss to ignore the need for innovation – perhaps even substantial change –- in what was once a brand new thing but has rapidly become part of 'business as usual'.

The good thing about something that's 'business as usual', is that it lends itself to the emergence of clear best practice, which is what the majority of this guide will focus on. We will return to the subject of innovation and the future in the final chapter.

# 3. Platform architecture

## 3.1. Technology stacks

The term 'technology stack' has a variety of practical meanings. At one level it's a useful communications tool to help technologists explain the functionality of a software system to non-coders. This may bear only loose resemblance to the true operational functionality of the software, however, and the phrase "marketecture" refers somewhat cynically to software diagrams that are built to sell the benefits of a system, but that may actually operate in a significantly less goal-optimised form (or indeed not exist at all until someone is willing to buy it).

In software engineering, a software stack is a set of coded programs that have different functions, but that work together to produce a result.

Most software systems are made up of interoperating units in this way, in no small part due to the fact that different functions require different computing resources. Modern web servers can be configured and optimised differently to suit different purposes, and whether the site is hosted on a company's own servers or on cloud-based service, IT architects will be making decisions about which hardware, operating systems, software and databases they need. The only exception to this would be if the decision were made to buy a complete Software-as-a-Service ecommerce platform, something likely only to be relevant to smaller businesses.

This section provides a short overview to familiarise readers with key terminology. Ultimate responsibility for the technology stack lies with the IT infrastructure team (or equivalent) or the supplier if the whole platform is outsourced to a third party.

### 3.1.1. Hardware choices

Hardware relates to the actual physical boxes that sit inside server cupboards. Although they look identically black and bleak, their contents often reflect the various different functions they're performing. Some will be prioritise storage, for example, a server that hosts lots of images. Others will be full of GPUs (graphics processing units) that are really good at processing large amounts of data, such as to optimise search functions.

Some elements of modern ecommerce, optimised to their fullest potential, will make use of custom hardware that has been developed specifically for a particular application such as Artificial Intelligence functions.

### 3.1.2. Operating systems and software

Operating systems allow the software to perform functions on the hardware, and Linux is the most popular server-side operating system in ecommerce. Software works with operating systems on web servers in the same way that software installed on your desktop computer works with Windows or Mac OS and in ecommerce, the core software is usually that which hosts web pages, Apache being a top example.

### 3.1.3. Databases

Finally, a lot of what goes on in an ecommerce website is simply just performing functions on a database: looking up product details to render them to web users, looking up account details, changing values like basket total and payment status, and changing states to move objects like orders through the ecommerce process.

The “big Excel spreadsheet in the sky” is a web server’s chosen database engine and MySQL is the world’s most popular open-source database system. Its name is a portmanteau of the name of its creator’s daughter, and SQL which stands for Structured Query Language. At lot of performance advances in web hosting in general have come from improvements in speed and reliability of database systems, including some new, cutting edge ‘No SQL’ databases like MongoDB. But for most ecommerce sites, the database demands are light compared to, say, Twitter, which has to be able to return a constantly refreshing list of relevant Tweets for each of its 200m users.

### 3.1.4. The LAMP stack

In reality, many ecommerce businesses will not be making strategic decisions about which machines to put in cupboards or even what server configurations to use. The phrase “LAMP stack” means “Linux, Apache, MySQL, Python/Pearl” and refers to the operating system, software, database and programming language being bundled together and installed on a web server, a bit like how Microsoft Windows used to come already set up on PCs.

### 3.1.5. Managed hosting

More recently, ecommerce teams have taken a further step back from the detailed configuration of web servers and opted for “managed” or cloud-based hosting instead. Cloud-based hosting simply means that the network of servers is remote and hosted on the Internet rather than on a machine in a cupboard in the company’s offices. Even if they are running entirely bespoke software, engineering teams starting afresh will likely take advantage of offerings like Microsoft Azure, Amazon Web Services (AWS) and SAP Hana, which offer hosted servers as a service. In doing so, the business benefits from the latest developments in performance, security updates and new product innovation as well as the security, reliability and connectivity of the hosts’ data centres, which are normally in key locations close to the ‘backbone’ of the Internet.

The way server functionality has been commoditised and turned into components has brought the language of web hosting closer to its applications, as many of the server/services sold by AWS sound like the key components of an ecommerce platform that are covered in the next section. For example:

- Storage
- Database
- Analytics
- Security, Identity and Compliance
- Messaging

This may sound like an act of “marketecture” on behalf of AWS, but in fact, the optimal way of configuring machines, operating systems and web software to perform these functions in the fastest, most reliable way requires engineers to work backwards from the end action and make application-specific decisions throughout the technology stack.

### 3.1.6. Understanding what’s under the bonnet

This might all sound a bit technical, and indeed redundant, as if you’re starting from scratch then best practice is simply to start with managed services. But ecommerce managers need to understand the core workings of the machines that power their products in order to make the business case for change.

If your business is stuck with a system that’s been built from scratch in-house, served from units within your company’s own data centre, then at some point the case will need to be made for the benefits in speed, reliability, and front line flexibility that could come from investing in an

alternative. Rather than leaving engineers to operate, miserably, within the restrictions they're given, ecommerce managers need to get to grip with the core components in order to help make the case for these business decisions.

### Everything I know is because I've been exposed to it in my job

"If you're working in ecommerce it's about the opportunity someone gives you – the talent they perceive, and of course, the attitude. I've got this job because I've always thought 'we can do it – we can solve this'.

"I never had an interest in technology before. People often think 'I'm not techy', but that's rubbish. Everyone has the opportunity to earn. Tech is the future; if you're not in touch with it you're out.

"In my job, you need to be a problem solver. Ecommerce is about a lot of challenges that can happen, and a lot of them are based on technology. Most people can handle a phone or an iPad but they don't understand the nitty gritty of how things work. It's really important to understand how things work and how they're connected together. This is about asking questions, being a good communicator. I have to be able to speak to senior staff, directors, and warehouse workers."

**Paula Abasolo, Head of Operations and Infrastructure, Dobell**

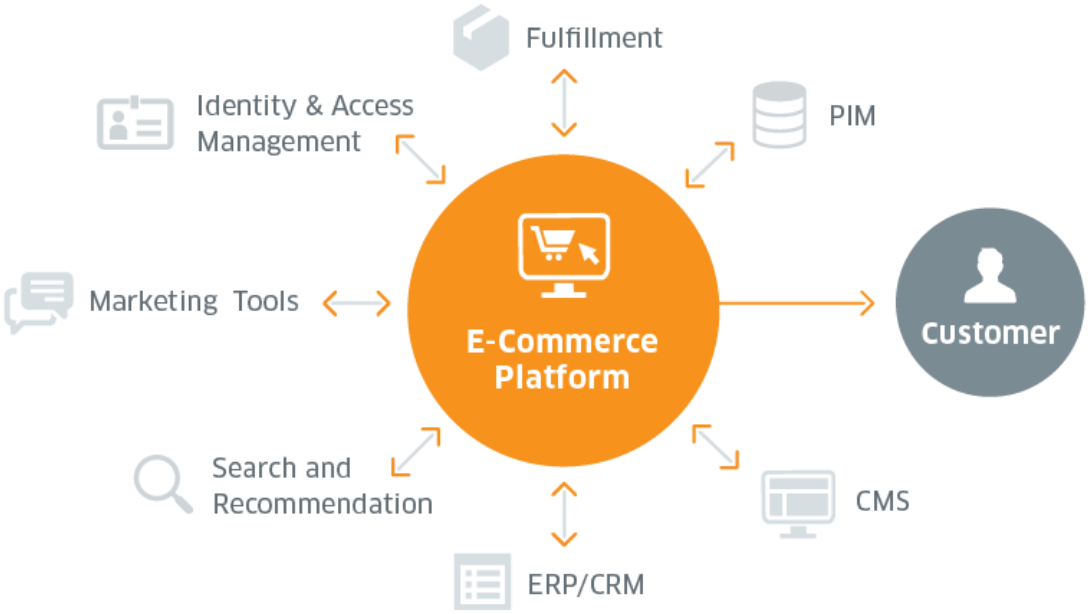
## 3.2. Ecommerce platforms

So far, this chapter has only explored what goes on 'in the cupboard' in terms of hardware, operating systems and software, databases and programming languages.

To use desktop publishing as a metaphor: we've talked about the 'stack' as being Windows, Microsoft Office, the Excel file that contains the records, and the language we're writing the report in. But we still haven't actually populated it with anything.

Sometimes the word 'stack' refers to the modules of the ecommerce website that are required in order to bring together an end-to-end ecommerce experience for customers. This 'stack' is more like the table of contents for this report: organising the different topics and areas of the overall experience into different, labelled components, on top of which the contents of the report can be built. To save confusion, this guide will refer to this as the 'ecommerce platform' rather than 'stack'.

Figure 1: Key components of ecommerce platforms (image courtesy AOE)




It is useful to use the word 'platform' to refer to what follows, on the basis that a core platform can be added to or adapted, and different applications can be built that can interact with it. For example, mobile applications, which are their own pieces of software, run on users' machines (phones) and vendors' operating systems (Apple iOS for example), each of which need access to the same database, assets and ecommerce functionality.

The major advantages of a 'platform' approach, other than in assisting discussion between engineers and marketers, are as follows:

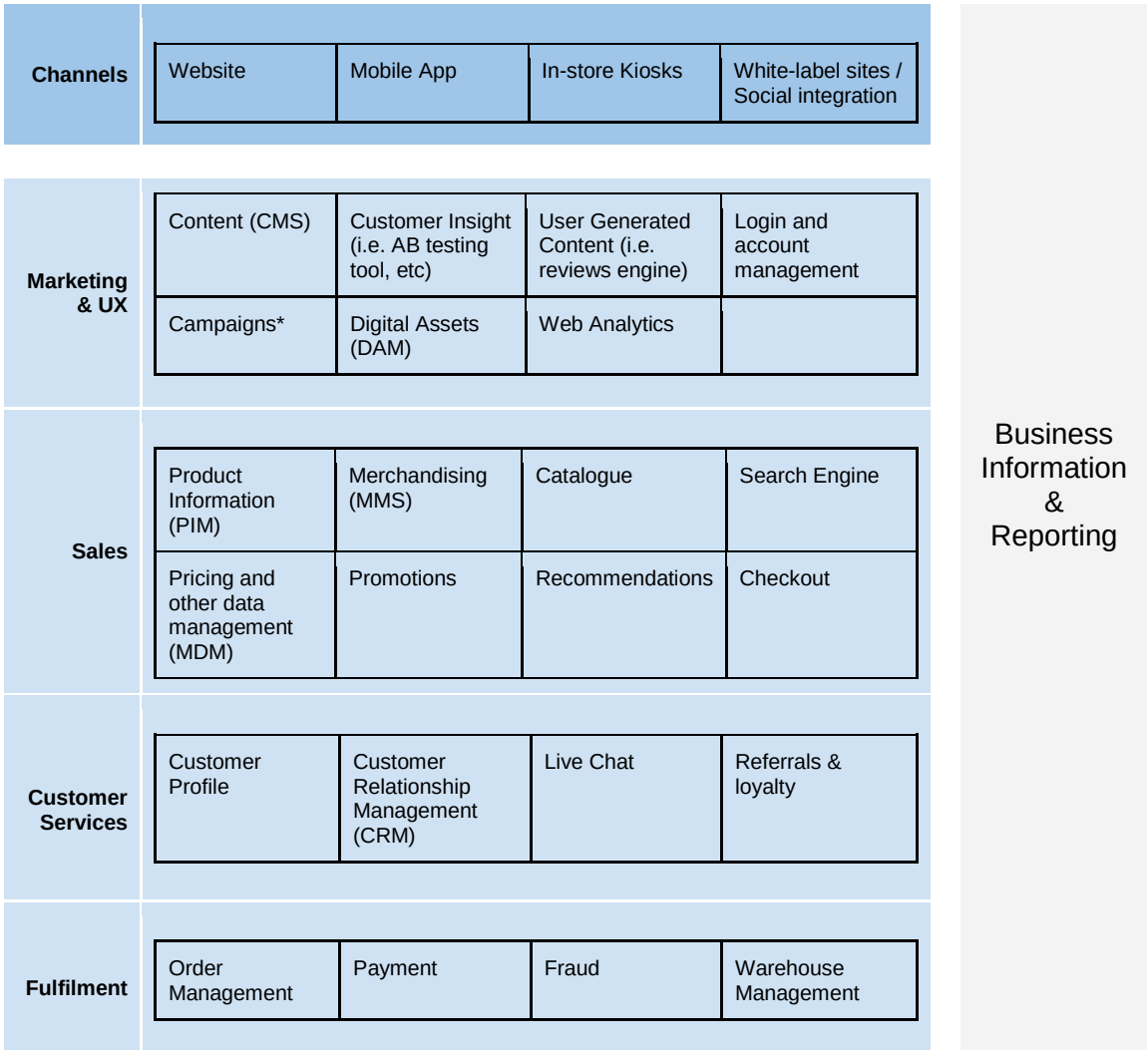
1. Modules can be added, adjusted or updated with minimal architectural disruption
2. Developers can choose the optimal hosting environment and server configurations to suit different types of application
3. Partial system failure is easier to cope with, and different fallback environments can be built
4. Certain processes that don't need to operate in real time can be carried out on entirely separate systems without the chance of certain tasks draining processor capacity (e.g. data analysis).

Point 4 above provides ecommerce managers with a particularly good opportunity for site optimisation, as removing non-critical processing from web servers speeds up the performance of the website and therefore greatly impacts the customer experience.

Typically, an ecommerce platform will include a **content management system** (CMS), which allows marketers to control the contents of the site), **web server** (where the assets, such as words, images, etc. are hosted) and **modular services** which perform certain functions or link the operation of the platform to other third party services like payment processing.

The table below outlines the different modules of an ecommerce platform from a conceptual business perspective (rather than technological or architectural). These modules aren't necessarily single applications and their function could be made up of multiple smaller applications or be part of a larger one, depending on the type and maturity of the platform, as well as the size of the ecommerce business.

Figure 2: Core functions of an ecommerce platform




Where each component is hosted will depend on the business. Some of the key components used throughout the entire customer journey may well be wrapped up and combined into one module. For example, several payment gateways will offer security and anti-fraud alongside payment acceptance and even login and account management functionality.

The core functionality of each component of an established ecommerce platform is explained in more detail below, along with the latest best practice approaches.

### 3.2.1. CMS

The main purpose of a CMS is *management* – it's the user-friendly layer that lets people control the contents of the database and the settings of the software that operates it, without the need to code. Whether you're a marketing manager or product owner, the CMS is the main component you'll use to control and adjust the site merchandising.

The requirements of the CMS will depend primarily on how many users within the business need the ability to change content on the site, and what functions they need to be able to perform.

The core functions of an ecommerce CMS are:

1. **Intuitive navigation and indexing**, so users can easily locate the content they want to change, whether by product reference, location within the site structure, or location within site navigation
2. **Product management** including easy ability to add, list, edit, and organise product listings, including appending listings with images and other assets
3. **Publishing facility** including blogs, pages and site navigation changes, based on templates or a set of templates approved by the business, as well as wizards and other tools to create or modify content.

Depending on how divided and distributed different aspects of ecommerce management are, a CMS could also include:

- A **dashboard** showing vital commercial and operational performance information
- **Inventory tracking**, including inventory warnings
- **Customer service** reporting in real time, showing the nature and volume of enquiries

Open source software essentially means the code is licensed for free and can be adapted, developed and distributed for any purpose without paying a fee. Some of the most used web server software (like Apache) and even operating systems like Linux are open source, which is why there are so many different versions of Linux – each one has been adapted by different teams of developers for different purposes.

Here are seven open-source ecommerce content management systems, courtesy of cmscritic.com:

1. Magento Community Edition
2. Prestashop
3. OpenCart
4. osCommerce
5. WooCommerce (Wordpress)
6. Jigoshop (Wordpress)
7. Drupal Commerce (Drupal)

For those who are building and maintaining their own ecommerce stacks, but don't want to use open source, solutions like Adobe Experience Manager are available.

## Further reading

**Choosing a hosted ecommerce platform: A guide to the alternatives to Magento 2**
https://econsultancy.com/blog/69453-choosing-a-hosted-ecommerce-platform-a-guide-to-the-alternatives-to-magento-2

### 3.2.2. Campaigns

Beyond publishing and reporting, certain marketing strategies can place a heavy burden on CMS, especially SEO, user experience and affiliate marketing functionality.

The following specific marketing functions may require technical and architectural considerations:

- **Keywords** for home, category and product pages. These need to be editable within the CMS so that SEO marketers can carry out their day-to-day work unencumbered.
- **URL and site structures** that are keyword filled, and SEO friendly. These are particularly effective at driving traffic to deeper-linked pages (e.g. https://www.sportsdirect.com/running/running-shoes/mens-running-shoes).
- Easy deployment of **landing pages** that can be incorporated into or excluded from core site navigation at marketers' discretion (although heed the warning in *section 6.5*).
- Provision of editable **structured data schema**. There are several benefits to doing this, including getting product pages listed in Google Shopping and improving the way search engine results are displayed to users. For example: using the real-world name of the site instead of the domain name, and the URL structure of the site in a breadcrumb-like format:

  Google began experimenting with this particular example for mobile search engine results in 2015, and have since started rolling out into desktop search. In this case the data "https://www.jdsports.co.uk › Men › Mens Footwear" is specified in the breadcrumb[1] within the core schema. More information about product page schema can be found on schema.org.[2]
- **Nofollow** and **norobot** options within the CMS. As well as preventing search engines from following or indexing links on core elements like checkout pages, this will allow marketers who are creating landing pages or other bespoke content to do the same.

### 3.2.3. DAM

DAM stands for digital asset management. This component is responsible for the uploading, tagging or categorising, storage and retrieval of digital assets like documents, videos and images.

Simple DAM systems let users upload and manage graphics, photos, videos, maps, and other assets from within the CMS, and even host non-web assets so a design team can manage assets across the business. DAMs may present to the CMS user simply as a pop-up, like the file manager that appears when you add an image to a site. Typically a DAM system will store and serve the content on a separate service to the CMS, and may even involve complex availability infrastructure such as content delivery networks, which online video platforms like Buto use to make sure video assets load as quickly as possible and in the right format for users.

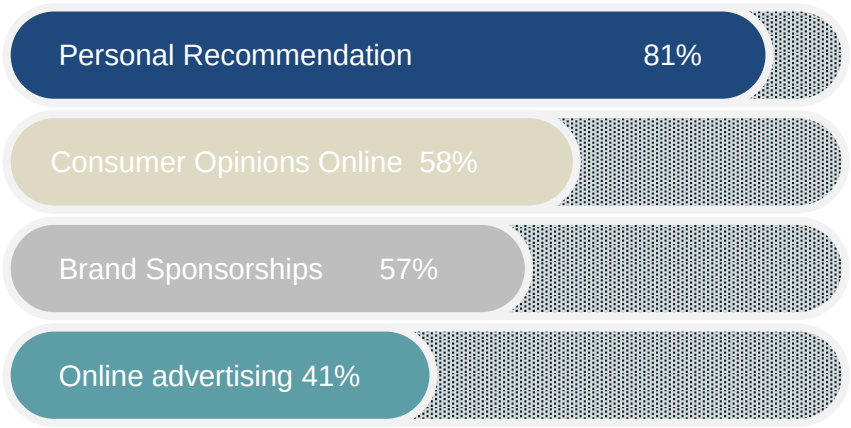
More sophisticated ecommerce websites often use third-party DAM systems that may be accessed by multiple retailers. Nielsen Brandbank, for example, hosts assets for a large number of FMCG (fast moving consumer goods) manufacturers, and supplies the majority of UK retailers with the assets they need to merchandise these products digitally, even including photography and product data.

### 3.2.4. User generated content (reviews)

According to Nielsen's annual Trust in Advertising survey, online consumer opinions are the second most trusted form of communication.

[1] *http://schema.org/breadcrumb*
[2] *http://schema.org/Product*

Figure 3: Most Trusted Forms of Communication, according to Nielsen




Used in the right way, encouraging customers to review products on your site could be very useful, but you could also waste a lot of time.

An often overlooked but important consideration in managing reviews is being seen to respond to negative reviews, particularly where the review relates to the service offered rather than the product. Frequent negative product reviews should be referred back to the supplier, or lead to products being pulled.

Dealing with reviews is a bit like handling social media: you need to let people say what they want, and only intervene in the profane or dangerous. Customer reviews when analysed can also reveal a lot about buying behaviour.

Reviews are a crucial bridge between the real, touchy-feely world, and the as-yet-unknown reality of a product purchased remotely. As a result, user reviews that validate purchase decisions generally tend to increase conversions. They can eliminate any doubts potential customers may have about a product, or can help product selection.

Customers sometimes enjoy leaving reviews, while others require little incentive before they do so.

Customer reviews can improve SEO, as they create a steady stream of new, unique, regularly updated content for search engines. Customers often search specifically for product reviews so make sure marketers monitor and optimise performance for search phrases that include product keyword + 'review'.

If review content is correctly formatted, then reviews can sometimes become incorporated into what's seen on the search engine results page, creating another opportunity to differentiate and increase click-throughs. Also, the additional content generated by user reviews increases the chance of ranking well for long-tail searches – lower volume but much more specific search phrases, which tend to indicate that a customer is seeking to purchase rather than browse.

All reviews are valuable, and a mix of positive and negative reviews helps to improve consumer trust in the opinions they read.

Indeed, stats from Reevoo suggest that the presence of bad reviews actually improves conversions. Of course, too many bad reviews aren't good for business and research from Lightspeed found that between one and three bad online reviews would be enough to deter the majority of shoppers from purchasing a product or service. The tolerance of bad reviews also varies depending on age groups.

Don't forget that people reading reviews will apply differing degrees of subjectivity depending on the type of product or service: reported deficiencies with electrical products might be taken as read, whereas film reviews are expected to divide opinions. Individuals reading holiday reviews might decide whether to heed or ignore negative reviews based on the tone, language and even writing standards.

### Attracting reviews

One guaranteed method of getting enough customer reviews to make your product pages more persuasive for shoppers is to use a third-party reviews provider, such as Reevoo or Bazaarvoice.

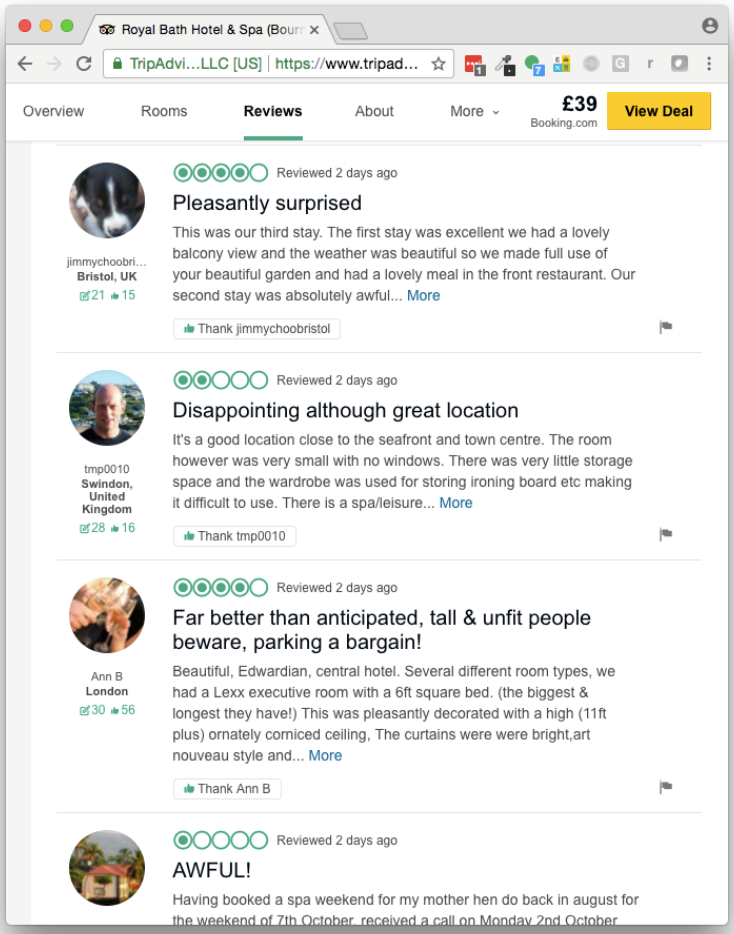
This is a useful way to build up a body of reliable reviews for product pages that could otherwise take some time.

The potential downside is that such reviews tell other potential customers nothing about buying from your site in particular, as reviews are generally syndicated.

Sending an email after a customer has purchased an item to ask for a review is a good idea, so long as they've been given enough time to receive and experience the product. This might vary product-to-product, even in the same retailer. Other tips are as follows:

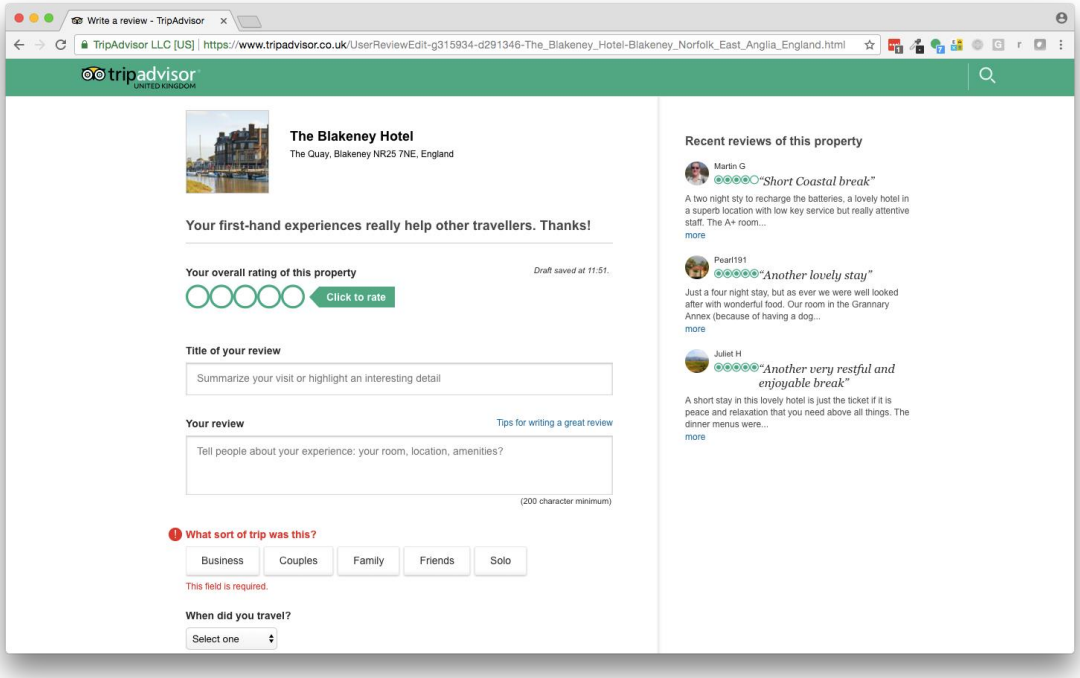
1. Ask for reviews on product pages
2. Attach particular requests for reviews to new or niche products
3. Keep it simple: provide a rating (out of five, for example) as well as written options
4. Automate purchase verification so customers don't have to prove they've bought the item in question. In particular, anti-bot verification should be seamless to legitimate people – they shouldn't have to prove they're human!
5. Consider ranking reviews by recency, or by allowing other users to rate the reviews (*Figure 4*).

Figure 4: TripAdvisor allows viewers to ‘thank’ reviewers



6. Consider filtering reviews so customers are more likely to see reviews from people who demonstrate similarly behaviours to them, or alternatively let people describe themselves or their purchase intentions when they leave the review (*Figure 5*).

Figure 5: TripAdvisor requires reviewers to describe the purpose of their hotel stay when leaving a review



7. Consider average score summaries to make it easier for people to compare products at a glance (*Figure 6*).

Figure 6: Tapping Amazon review summaries on tablet reveals a breakdown of the scores

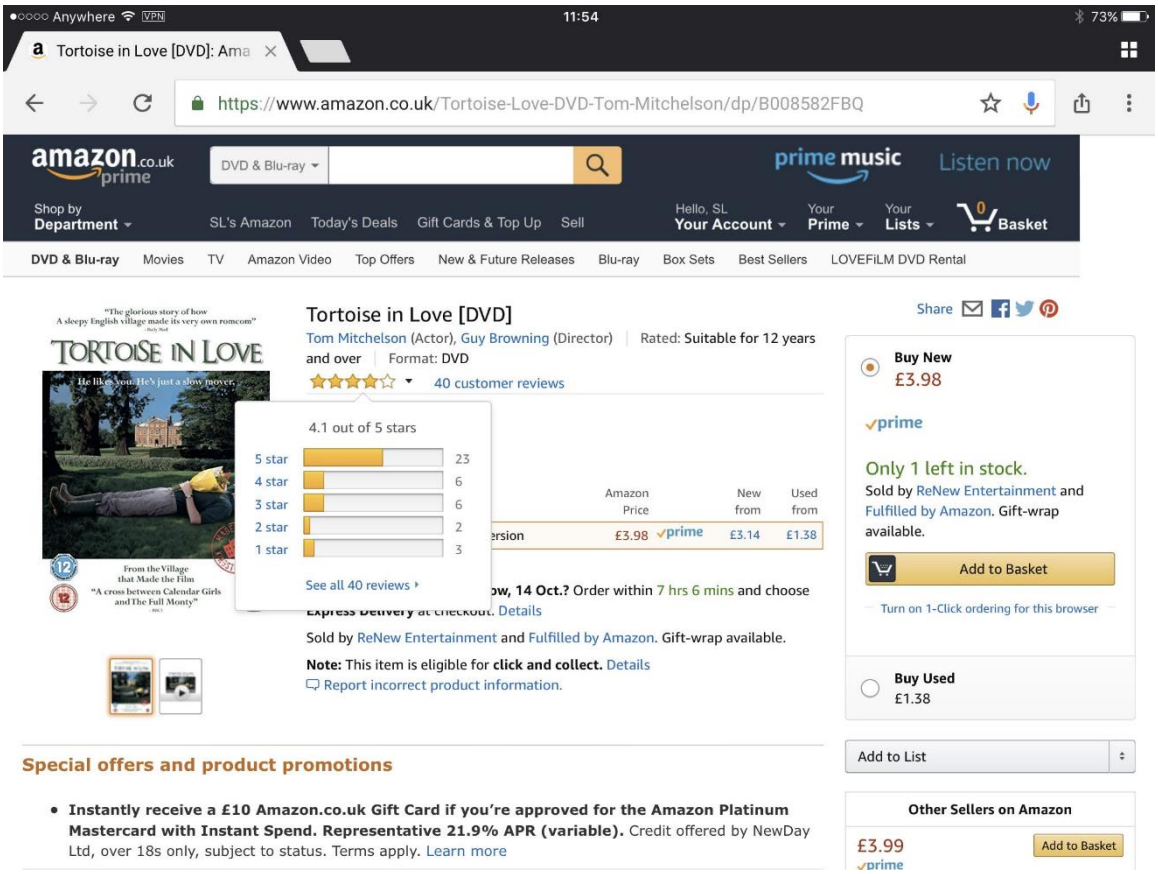
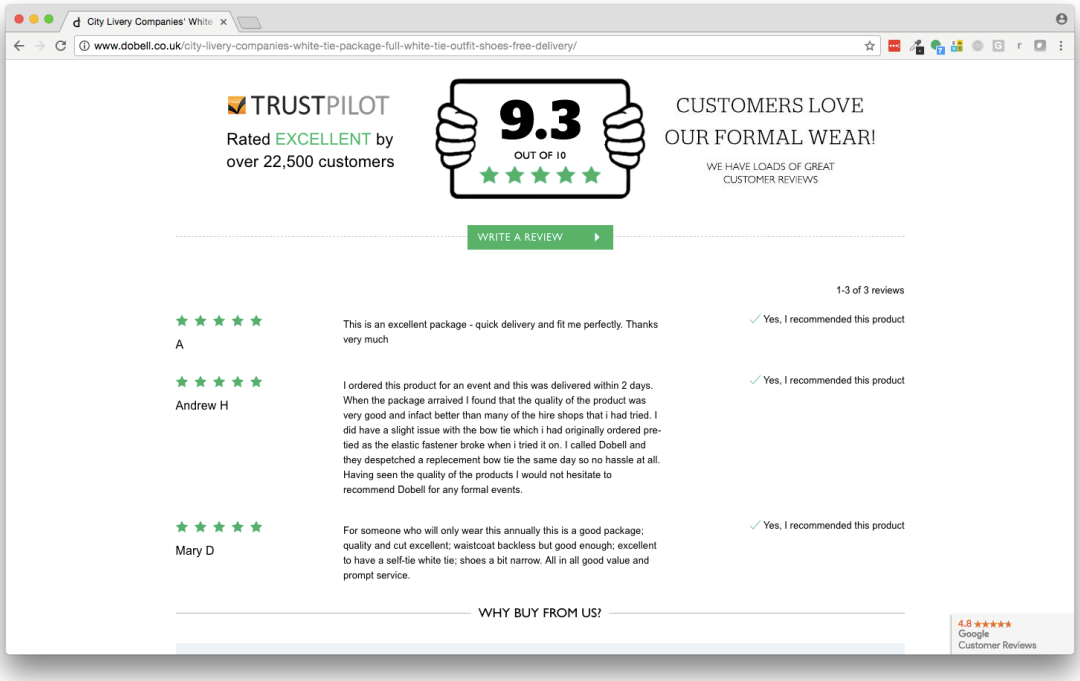


Figure 7: Dobell makes extensive use of reviews, review averages and third-party hallmarks like Trustpilot




8. Reward people for leaving reviews. Some dedicated review websites gamify this, but retailers could offer incentives within their loyalty programmes (*section 6.7.6*) to encourage people to leave reviews.

## Further reading

**TripAdvisor: the funniest reviews, biggest controversies and best spoofs**
http://www.telegraph.co.uk/travel/news/TripAdvisor-the-funniest-reviews-biggest-controversies-and-best-spoofs/

## 3.2.5. Web analytics

It's unlikely that ecommerce managers would commission any system without some form of analytics but modern marketers may need to implement a range of different tracking systems, some of which may be temporary.

CMS configuration can allow the insertion and amendment of different tracking codes to make this undertaking more autonomous, and let marketers set up and run different programmes from overall analytics reporting, to customer journey mapping, usability testing, affiliate tracking and A/B testing.

The alternative to allowing insertion of tracking codes via the CMS is to agree a routine programme of deployments of new tracking systems, and make this function part of 'business as usual'.

## Ecommerce managers really need to be confident using analytics

"We don't use a sophisticated analytics system. But we try and make sure everyone in the team is capable of looking at reports, and digging into it in enough of a way to give us pointers and guides. Simple things like time on page, exit rates, where people go next, which page most visited, most exited, etc.

"We try as much as possible to embed a culture that whatever you think, try to find some evidence that supports, embellishes or refutes it."

**David Kohn, Customer & Ecommerce Director, Heal's**

## 3.2.6. Login and account management

It would be extremely unusual for even the most basic ecommerce system not to include login and account management functionality. But for ecommerce managers considering a modular or hybrid approach, the ability to choose a specialist vendor for login and account management has advantages.

More complex businesses may also find that login and account management services are not the sole preserve of ecommerce functionality, and ecommerce platforms may be required to interact with other business systems to preserve a centralised way of managing customers' details, preferences and other settings.

Having a single identity per customer is important for any sized business. Often where a business has multiple digital offerings (which is particularly the case with supermarkets) the customer ends up with multiple accounts. This is both annoying for the customer as moving between sites is inconvenient, but also tying up a customer's behaviour into a single picture becomes tricky.

This is equally true for smaller businesses where the concept of a single customer profile may not exist: it makes doing any marketing analysis even more complicated and causes lots of double counting.

Gigya (just acquired by SAP at the time of writing), Bitium and onelogin are examples of specialist customer identity management platforms. But the "big four" (Google, Apple, Facebook and Amazon) all have a role to play in login and account management: Google and Amazon via their hosted ecommerce service offerings, which include login and account management services, but Facebook specifically due to the adoption of its "Log in with Facebook" feature.

Around half a million websites offer Facebook Login as a faster way to create and/or access an account, and the simple explanation is: convenience. Minor as it may seem, not having to key in email address details, especially on mobile, is a boon to customer convenience and a great way to reduce checkout abandonment (26% of respondents in a one Econsultancy survey[3] stated that being forced to register would cause them to abandon a purchase).

## Further reading

**Social login adoption grows despite privacy concerns**
https://econsultancy.com/blog/66711-social-login-adoption-grows-despite-privacy-concerns

**The pros and cons of a Facebook login on ecommerce sites**
https://econsultancy.com/blog/61911-the-pros-and-cons-of-a-facebook-login-on-ecommerce-sites

**Facebook Login best practices**
https://developers.facebook.com/docs/facebook-login/best-practices

[3] *https://econsultancy.com/blog/7730-why-do-consumers-abandon-online-purchases*

## 3.2.7. PIM / MDM

Not all ecommerce platforms will require dedicated PIM (Product Information Management) or MDM (Master Data Management) functionality. The smaller the catalogue, the less important it is to have a dedicated system. The need is driven up in turn, however, by specification complexity.

The main benefit of having a PIM system is that it provides a centralised, single view of all product details. This makes it easier to ensure the consistency and accuracy of product information across all retail channels, especially for larger inventories. It also makes it easier to build additional software products that have different requirements.

If a new product, such as a mobile app, only requires certain information, then it can query the PIM system and receive only the information it needs in return. Likewise, third parties that are updating technical information can be given restricted access to PIM systems (albeit with approval workflows), in the secure knowledge that they are not being granted access to any other aspect of the ecommerce platform.

PIM systems typically hold information including:

- Product names
- Product descriptions of various lengths
- Meta text for the product page, as well as possible SEO friendly URLs
- Defining attributes, used for SKU resolution, and a combination of multiple attributes usually resolves to an item
- Descriptive attributes not intended for any SKU resolution but that provide more information about the product
- Images of different sizes including metadata, videos and other product merchandising content
- Taxonomy details that help put products into the right categories
- Any other information required, for example: food ingredients, safety instructions, related items such as replacement parts or consumables, etc.

Some sectors conventionally use shared third-party PIM operators, enabling brand owners to control product information in one centralised place, from which multiple retailers can obtain product information. Many FMCG brands make use of Brandbank, as previously mentioned, for the same reason.

Smaller businesses probably hold pricing information (or at least recommended retail price) with the product details. Other businesses will have separate applications for price management. It may be that a base price comes through from the supplier and then a set of rules is used to calculate the selling price.

Non-product or complex retailers have PIM models that depend on third parties' systems to provide real-time inventory information, for example, anything involving travel bookings, where a two-way live relationship between vendor and multiple platforms will be essential in allowing customers to specify, price, hold and purchase from limited global 'stock', such as the number of seats on a plane or beds in a hotel.

MDM refers to a slightly broader concept. It still relates to data accuracy, consistency and centralised availability, but applies to all data that could suffer from being held in multiple places, or be updated or overwritten by different services using non-real time processes. The MDM 'owns' the data and is the only one that can make changes (at least to the core information). Other

applications then get the relevant data periodically (either doing a full refresh or deltas) to use but they can't make changes to it.

### 3.2.8. MMS

The MMS – or 'Merchandising Management System' – is used by larger ecommerce retailers to handle promotion management, demand forecasting, pricing/stock/inventory management, and supplier management (POs/invoicing/etc.). These systems tend to be operated by separate buying and merchandising teams (*section 5.2*).

In smaller ecommerce retailers, the reality is more likely to be based on bespoke applications and spreadsheets.

### 3.2.9. Customer support

The level of support people will need to navigate through to purchase will depend on how complex your product is. Ultimately, decisions on how much real-time support to offer will be down to cost. The conversion benefits to higher value purchases (even if they're for simple items) could easily justify one-to-one assistance. Equally, there's an argument to be made that unless ecommerce prices are significantly cheaper than your high street offering (if you have one), customers should be able to expect the same level of service online as they get in store.

One of the most practical recent applications of AI has emerged with chatbots – mini software programs designed to interact with consumers on a one-to-one basis without the need for a human to manage the conversation in real time.

In online chat, where customers are already using text to converse, chatbots can be built that require very little actual AI in order to interact with humans. Chatbot complexity ranges from the ability to analyse (or "parse") short snippets of text and respond to inputs with simple Yes/No questions, all the way to natural language processing (NLP) powered systems like those provided by Transversal, whose processing is dependent on the latest developments in AI to learn information and behaviours.

Beware the potential for customer frustration if they don't realise they're talking to a chatbot, or if the functionality of the chatbot is so limited as to make it useless for all but the most straightforward questions (which a well-researched site navigation should be able to solve more easily anyway). And remember that even the best system is only as good as the data it's fed. A chatbot could be amazing at synonym matching and multi-language support but if you haven't fed in the content effectively then, just like a human, it won't be able to help anyone.

You can find out more about AI application in Econsultancy's Trend Briefing: Artificial Intelligence (AI)[4] report, a supplement to the Innovation Best Practice Guide.[5]

Whether human- or bot-based, think carefully about where and when to offer chat. Does it make sense to pop up immediately on arrival, or at other trigger points: extended dwell time, or on product pages, or once a customer has started to specify a product or build a basket? Where are the sticking points in your journey? And what are the best ways to help people through them? Is a basic chat facility the key to reducing the 'wrong kind' of checkout abandonment (*section 7.2.2*)?

Decision time frames are also worth considering: if a user is earlier on in their purchase journey, offering an email or social route to contact might be a cheaper but acceptable alternative because there's more time. The same principle applies to the time of day: customer service centre shifts will need to be organised around optimum purchase windows rather than 'normal office hours'.

[4] *https://econsultancy.com/reports/trend-briefings-artificial-intelligence-ai*
[5] *https://econsultancy.com/reports/innovation-best-practice-guide*

## 3.2.10. Payments

Payments are covered in a number of sections of this report, namely *6.1* (site design affordances) *6.6* (checkout), and in particular *6.6.1*, which includes an example of how payment gateway Stripe has put the rest of the world to shame with the simplicity of its payment details entry form. *7.2.1* talks about the importance of payment processor performance and *7.2.2* warns of the significant role payment processing can play in checkout abandonment, and *chapter 8* puts payment problems at the heart of opportunities to innovate.

*6.7* advises that a powerful benefit of offering customer profiles is allowing people to store different payment cards. This can easily be handled without going against the advice in *section 5.6*, which states that using an **outsourced payment gateway** is generally the safest way to go.

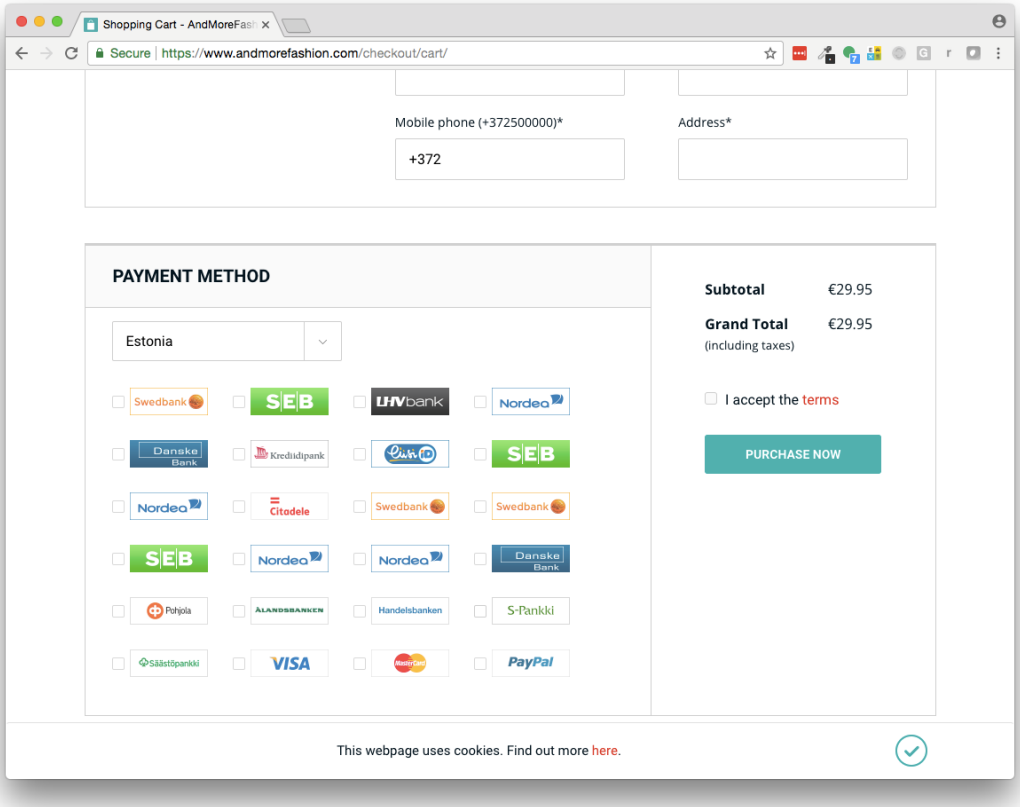
So what's left to say about payments? The author recommends, on balance, the following:

**Using a gateway** is the optimum route. But this should involve complete and seamless integration with the site design – hosted payment pages are poor and unnecessary.

**Offer payment options based on customer needs**. Reduce choice and confusion by only offering the essentials – although more payment types will be required for different international customers, and attempting to penetrate a local market like Estonia will require significantly more options than Visa and Mastercard (

Figure 8*)*.

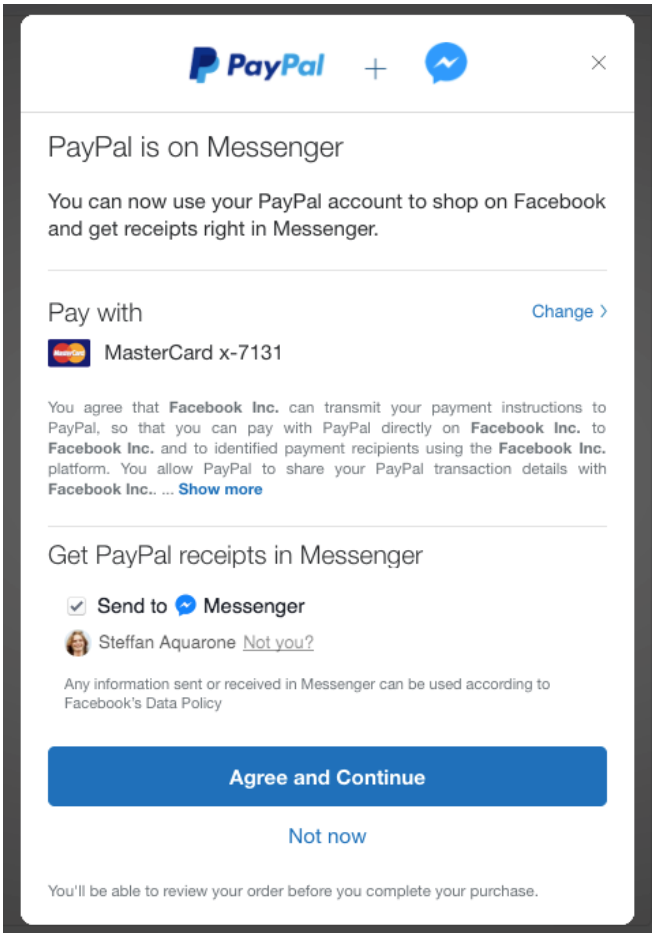
Figure 8: The popularity of direct-from-bank payment options in Estonia means AndMoreFashion offers 24 different payment options




**Consider multiple gateways** if you can shop around for better deals in different countries – but be sure to make the process standardised and seamless for customers.

**PayPal**. Although you'll pay more, a lot of the issues around fraud will be dealt with by PayPal and for new or smaller ecommerce retailers, PayPal may offer an improved sense of trust. It may also be certain users' preferred online payment option because of the features it offers to a generation that are rapidly abandoning email (*Figure 9*).

Figure 9: Customers can choose to receive receipts for purchases made with PayPal via Facebook Messenger




**Chargebacks.** Chargebacks happen when customers tell their card issuer that they didn't order or receive the goods they've been charged for. Whatever your size, you'll need a process for handling chargeback disputes to avoid this becoming a drain on resources. Larger retailers will automate the creation of ordering and delivery evidence required to respond to chargeback requests.

**Anti-fraud.** As *section 5.6* noted, card fraud can be a big problem for online retailers and the truth is that no retailer is big enough to tackle the problem alone. Like anti-virus software managers, card companies and gateways subscribe to shared services that can help blacklist stolen card details so they're not allowed through checkout.

But retailers can use other data to identify fraud earlier than the payment stage too – delivery address blacklists, for example, or order value triggers that allow orders to proceed but flag them for manual confirmation prior to dispatch. There are even fraud-related patterns that can be detected from details such as the combination of keys used to create a new user account – advanced fraud prevention strategies might feed a number of data points into a platform such as Siftscience to obtain real-time scoring that can help make decisions about which transactions to flag.

**User experience.** Despite the advancement of anti-fraud tools across the online payments industry, generally the user experience of payments hasn't kept up. The mere existence of 3D secure suggests banks and card companies are thinking only about managing down risk, and not managing up conversion for retailers.

3D secure requires users to create a separate password for their payment card, and recall specific digits before being allowed to complete an online purchase. It's a cold conversion killer – and many retailers have decided, wisely, to take the hit on cost of turning off 3D secure in the interests of customer convenience and conversion.

Figure 10: Example of 3D secure payment verification – some payment processing experiences can be horrifically badly designed


**Cryptocurrency.** If you feel that there is unmet demand from customers wanting to buy with bitcoin, or a PR opportunity in accepting cryptocurrency, then go for it. But if not, don't bother.

**Don't forget form prefills.** Most major web and mobile browsers make it easy for customers to store payment details and auto-complete all but the 'last three digits' of payment details in web forms – so ensure names of **payment form fields are standardised** and aligned with browsers' autofill options.

## Payments is one of our core integrations

"We used to work with seven different [systems for offering different payment options] – each with different integrations and applications. But since moving to Adyen, we have one system to integrate with different payment options. They are technology-led and really understand ecommerce complexity."

**Paula Abasolo, Head of Operations and Infrastructure, Dobell**

# 4. Approach I: Upfront analysis

*This section will help people who are seeking an understanding of ecommerce best practice from the ground up, whether that's because it's new to the business, new to them, or because they're joining a team that's been operating ecommerce for some time but has an appetite for appraisal and improvement.*

## 4.1. Cultural change

Even in an 'online' business – one which has had a web presence since its inception – embracing ecommerce can be slow. If a business has already invested in an ecommerce solution then sudden change might break the smooth operation of 'business as usual', or the business might still expect to get more from its original investment without funding further changes.

However, customers don't care about the stage a business is in its technology cycle, and the only long-term solution to staying ahead of the game is being responsive to change, and building review and improvement into technology investments.

Achieving this starts with alignment around a vision. In today's customer-driven world, this vision will likely be a customer vision and it could require some substantial changes to the way a business sees the role of ecommerce.

Getting everyone aligned and rooting for your vision may involve cultural change across the business – bringing people together from 'online' and 'offline'.

The degree to which businesses truly understand their customers is still questionable. There is often a disconnect between how customers are viewed online and how they're seen in the real world, creating the tendency to treat people differently in different environments, even though they're the same person.

Furthermore, mistakes are often made because people think their customers are like them. Nothing beats directly asking the customer (or potential customer) to get an understanding of their needs, decision points and current frustrations. Good research doesn't have to cost much but will give you a much better idea on how to build out your strategy.

## 4.2. Understanding things from a customer's point of view

**Saying that 'understanding the customer is key' sounds trite**

"But in a business of our size (there are eight in the ecommerce team, four of whom are responsible for product/content) it's very easy to forget what the customer is trying to do. Whether you call it role-playing or scenario setting, we try and divorce ourselves from what we know and try to work our way through basic customer situations and assess them more objectively.

"There's a lot of cliché talked about it – putting yourself in the mind of the customer – but putting yourself in the mind of the customer is essential."

**David Kohn, Customer & Ecommerce Director, Heal's**

To truly understand a customer's needs, they must be thought of in the round. Then the thinker needs to put themselves in the customers' shoes, and think about the most useful, relevant and timely engagements that they might want to make across their entire journey or lifecycle.

Only then, when "the journey" in its broadest sense is defined, can ecommerce professionals begin to build the technology that puts the right things in the right places to serve the customers' needs at any point in the journey, whether it be where they arrive on site, when they're looking for information or wanting to buy.

A notable example is how John Lewis grew its ecommerce performance to 33% of retail sales in the years leading up to 2016. One of the ways it brought together 'online' and 'offline' worlds was making the high risk decision to extend its trading promise of "Never Knowingly Undersold" to its online store.

It also extended its click-and-collect service to almost every John Lewis and Waitrose store. But as well as this, ecommerce was thought about at a company-wide level through addressing the future of retail in its widest possible sense.

### If you don't follow your customers you're dead

"We can help influence people, but we can't change them. The retail revolution is what we called it. We wanted to signal to everyone in JLP that things were changing, that we felt the tectonic plates moving.

"At the macro level, we set some very challenging targets – 40% of sales online by 2020. This was top-down recognition that our business was changing and has to change. It opened the door to thinking about a lot of things differently."

**Paul Coby, John Lewis, quoted in Econsultancy's Innovation Best Practice Report[6]**

## 4.3. Customer missions

John Lewis's Retail Report 2016[7] revealed four common missions it had distilled from interrogating customer data across all of its channels:

*"Today, purchase behaviour is more closely linked to customers' goals than ever before. Their individual needs are at the centre of the journey, whether they are shopping with a phone, on a laptop or visiting a shop.*

*"Through mixing and matching channels, they can cater for any possible scenario, from seeking inspiration to making an emergency purchase. From analysing the preferred options selected during these journeys, we have seen four common customer missions emerge."*

**Mission 1: I need it urgently**

*"Customers on an urgent mission are not interested in taking their time to enjoy the experience; they know what they want and they need to get hold of it as quickly and conveniently as possible. Often on-the-go, they are likely to buy using their smartphones.*

[6] https://econsultancy.com/reports/innovation-2017-best-practice-guide/
[7] https://www.johnlewis.com/content/the-john-lewis-retail-report-2016

**Mission 2: Entertain and inspire me**

*"When customers are in the mood to be entertained or inspired, shopping is not just about the products they buy; it is the experience that counts. Our customers increasingly use social media when embarking on these missions to find inspiration and source ideas.*

**Mission 3: Advise me**

*"The range of products and services on offer for every area of modern life is constantly expanding. While social media and online reviews can be fantastic for inspiration and information, they can be overwhelming, leading customers to feel confused and in need of more personalised advice. In this mindset, customers want to consult a trusted authority to help make the right choice.*

**Mission 4: I buy on a whim**

*"Not everyone who comes into a John Lewis shop has a particular mission in mind; 37% of customers are just browsing. They may spot some items that are missing from their lives and pick them up on a whim. They are not as likely to have done any research. They are also not in a rush but enjoy browsing a broad range of options."*

## 4.4. Paying to step back

Lots of external data, which shows how much people are spending online, can certainly help make the case for change, but informed investment needs to be rooted in data about customers. How are *our* customers changing? What are the tipping points in *our* customers' behaviour?

Sometimes reframing a business from the inside can be tricky, so hiring an external consultancy to come in can help answer questions about the role and purpose of ecommerce. Such consultancy should focus on customers, including finding out more about how they perceive the brand and what their goals are in order to work out how online can help achieve these goals.

Even in a successful, long standing ecommerce business these factors can change or get forgotten in the course of 'business as usual'. But as with any reflection or innovation project, the point where performance is strong is the best place to start thinking "what do we need to do differently in the future?".

This type of undertaking can also help reveal changes in the market, especially how different groups of customers go about researching and buying. For example: in ski holiday purchasing, a younger demographic with significant spending power has a much higher technology expectation and the propensity for certain customer groups to shop around and make decisions based on site design alone can cause sudden disruption to market share.

Even if you don't commission external help, doing upfront analysis and understanding how things work is well worth the time as long as it doesn't lead to analysis paralysis. Getting the balance right is key: on the one hand, your new team won't trust that you understand the business if you jump straight in; but if you spend a year coming up with your roadmap they could become disillusioned.

A quick and effective way of doing upfront analysis is simply to carry out interviews with a wide range of different people: marketers, operations people, developers, senior stakeholders – even the people who pick up and pack the orders. What do they understand the vision to be? What is the point of ecommerce, and what's their day-to-day involvement? Where are the pain points? It's worth asking about even the simple things like about how people get content onto the site, and

how it's been built. This doesn't need to involve comprehensive documentation, just a range of views from different perspectives to help set the scene.

## 4.5. Benchmarking

If you're starting a new position in an ecommerce team, the first thing to understand is what technologies are in place, and how the business has performed historically. This might be harder than it sounds if the right metrics have not been captured consistently for a long period of time.

The purpose of this data isn't only to look at historic sales volumes and how much marketing investment, human resource and other resource it took to achieve them; it's also to try to understand how much the ecommerce team has done to understand their customers, and what changes have resulted from research, or experimentation, or feedback, for example.

This is what a lot of marketing people spend a lot of time doing, but it's just as much the job of ecommerce leaders. It's particularly important to understand the hardware that customers are browsing and buying on, and to pay particular attention to how well the site performs across these different devices.

The next step is to compare these results with how other businesses in the sector are performing. This may be easier said than done, especially in industries that are changing. For example, the cruise sector is quite immature in terms of direct ecommerce activity, despite it being part of one of the sectors that has been most up-ended by the web.

This research will help you understand where your current proposition fits in the marketplace. Are you leading the curve, or behind it? How does the share of ecommerce sales compare to share of brand awareness? If there is a high share of brand awareness, but a lower share of ecommerce sales, then there are probably conversion issues that need addressing before any further significant investment is made in advertising.

It might well be the case that the marketing, content and acquisition teams are responsible for bringing people to the site, and the ecommerce team's job is to optimise the path to conversion, but if these teams' visions aren't aligned then it won't work.

# 5. Approach II: Planning

## 5.1. KPI setting

There's no point starting work unless you know what you're aiming for. But it can be surprisingly difficult to find out what the organisation's expectations are. If there is no clear business strategy, or no goals, then part of the project might be to work with the rest of the business to come up with the framework into which ecommerce activity can fit.

In these precious early parts of the journey it's also worth trying to understand the change process. How easy is it to get things done? What change will be needed in order to deliver what's required in ecommerce? Who is empowered to do what: can merchandise and product managers access and edit the site directly? Can UX people get stuff tested and done easily? Roadblocks in these key areas are well worth identifying early on.

## 5.2. Team structures

There are lots of quick ways to get online, and very small retailers might be minded to use a plug-and-play platform or even begin their ecommerce journeys within a marketplace like Amazon, EBay or Etsy.

But it's not just small retailers that could benefit from starting out using entirely third party, out of the box solutions. A lot can be learned from starting inside an established ecommerce ecosystem before branching out and this is just as viable an option for an ecommerce manager coming into an established team as it is starting from scratch.

### A lot of ecommerce people come from an IT background

"Sometimes you just have to get stuck in to get things done. But you'll often find at a system operations level there is just one person who is really clever and understands everything, but it's all in their head. This comes from people trying to get stuff done quickly and not thinking 'how should we make sure the knowledge is shared?'.

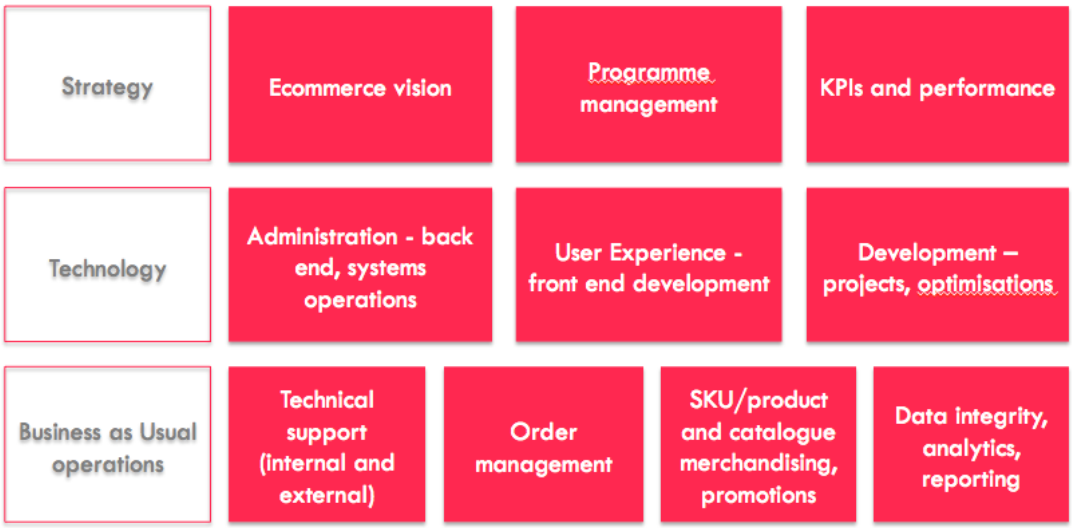
"It is likely they are a disillusioned senior developer and a potential flight risk.

"This is a big risk to the business – both due to potential loss of understanding and because they become a bottleneck to delivering change."

**Isabel Mack, Chief Product Owner (eCommerce), Iglu**

Team structures in ecommerce tend to break down into three core areas: strategy and management, technology and 'business as usual' (*Figure 11*).

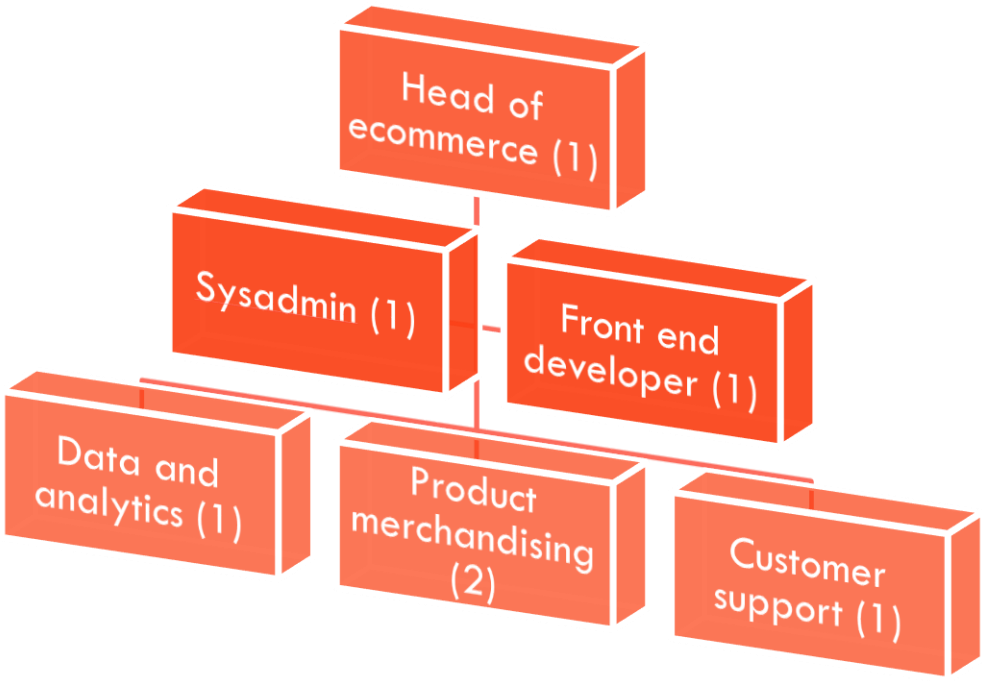
Figure 11: Ecommerce team structures




The roles that scale the most in terms of people tend to be those most directly connected to order volumes – technical support and order management – or total product lines – such as SKU (stock keeping unit) managers or catalogue managers.

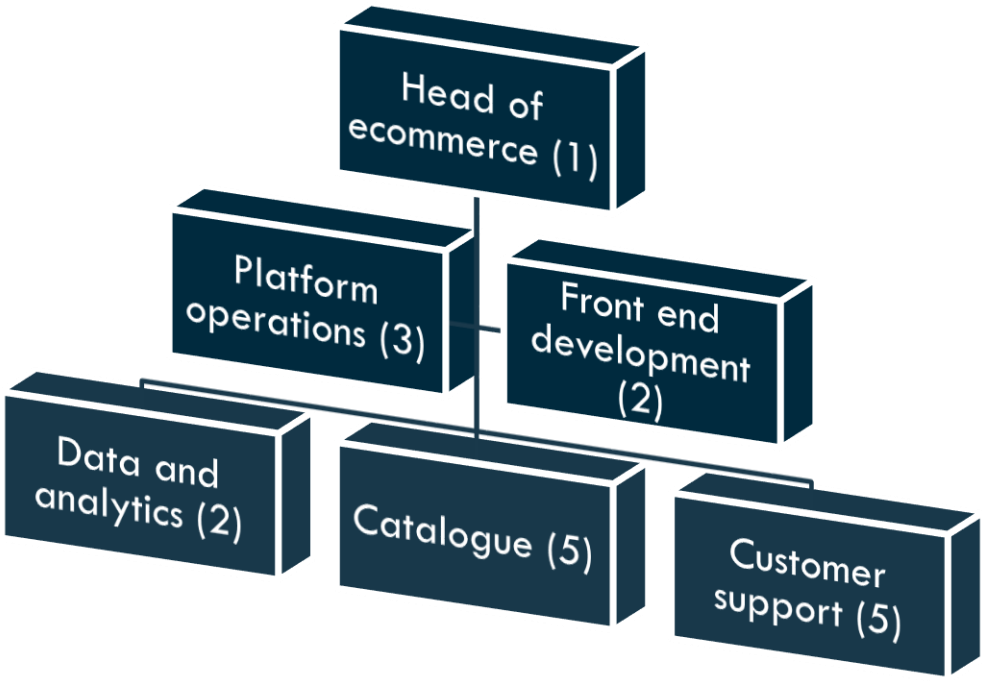
The language of job titles varies widely, with those who have commercial accountability often referred to in equivalent, brick-and-mortar role titles like "trading manager". But regardless of phraseology, a typical ecommerce retailer turning over up to £10m a year might have a team of seven or eight, structured as shown in *Figure 12*.

Figure 12: An example org chart of an ecommerce retailer turning over up to £10m per year



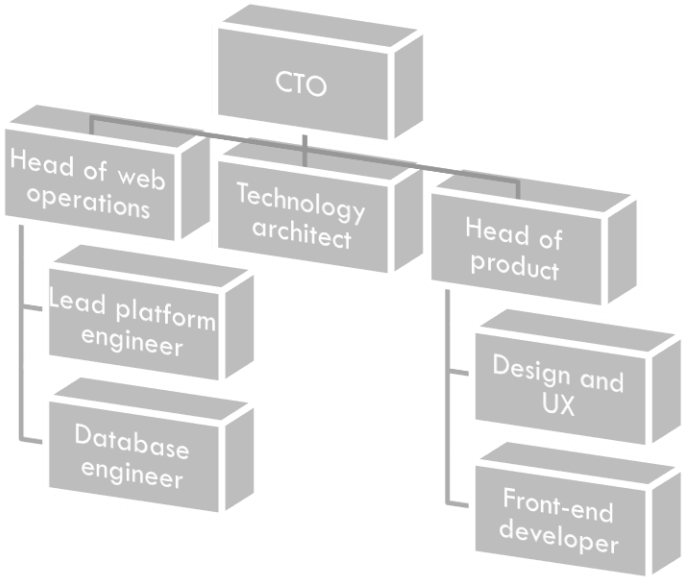
As revenue exceeds £10m – or in particular as order volumes or catalogue sizes increase – head count in certain roles will increase to reflect the increased customer demands and/or benefit of development and optimisation (*Figure 13*).

Figure 13: An example org chart for an ecommerce retailer turning over in excess of £10m per year




Ecommerce businesses that exceed the £50m turnover level will likely see significant parts of the customer support and catalogue functionality moving over to separate business functions, and the core ecommerce team starting to look more like a large technology team, likely running a significant amount of the technology themselves (*Figure 14*).

Figure 14: An example of an org chart for an ecommerce business turning over in excess of £50m per year, where some functions may be moved out to other teams




In these larger teams, the challenge of too much information being held by too few overworked individuals can be resolved by organising the ecommerce team around products rather than disciplines, and having a multi-skilled team responsible for each product. Through this ownership ecommerce managers can empower people to ensure that a good level of understanding of the system is shared among the team and dependency is not placed on any one member.

## 5.3. How to prioritise

Depending on what you find out in the research phase, and once you know the size of your available investment and the organisation's attitude to change, you can start to shape your long-term plans.

Many of the expert contributors to this report warned against setting bold strategic ambitions or transformative projects for ecommerce when what is really needed is focused attention on whatever is at the top of a fluid set of priorities or improvements while ensuring 'business as usual' is carried out optimally and without error.

Similar warnings were shared about prioritising what to document. While some documentation is essential for complex areas, large documentation can go out of date quickly and can be difficult for new team members to pick up.

### I'm a big advocate of minimal documentation

"The test scripts / scenarios should be able tell the story of how the system works - what functionality it enables. Then a system context diagram to explain the overall product architecture and some core journey / transaction maps for more complex areas.

"For example I had a complex diagram to explain the booking transaction for cruise holidays. It documented everything that happened once the customer selected the 'complete booking' button at the checkout before they saw the booking success message.

## I'm a big advocate of minimal documentation (cont.)

"There were multiple transactions, multiple systems and multiple failure points to manage and it was really important that everyone understood what happened (in both happy and failure scenarios).

"Any other documentation produced should only be 'alive' for as long as the work to make the change is being done. Once the change is delivered the test scripts and core journey maps can be updated and then the other bits discarded."

**Isabel Mack, Chief Product Owner (eCommerce), Iglu**

# 5.4. Fix the process first

It could in fact be beneficial to skip the technical optimisations at first and focus on ensuring online customer experience is understood and optimised across the business. Do people outside the ecommerce team understand the process by which new products and promotional content are published? Starting with people and processes before attempting technological optimisations could also help win round the embattled lead developer who will see you doing the things they might not have been able to do – and reduce wasteful technology requests.

As with any aspect of business that requires ongoing maintenance as well as future strategy setting, ecommerce needs leadership and that means bringing the right people together around a table to discuss a shared vision for the experience they want customers to have, and the business objectives that run alongside it.

It doesn't mean prescribing the order of technology tasks by committee, though. There are various agile software development approaches that focus on how cross-functional teams can work collaboratively, and how planning and development can be made more flexible. While these frameworks vary in approach and application, they usually have the following in common:

- Clear goal setting over short periods of time (e.g. two weeks)
- Small, focused teams working flexibly and collaboratively
- Regular review and reflection (e.g. daily)
- Product owners to help keep the team focused and deflect distraction from other stakeholders
- Dedication to 'shipping' working code at the end of the period

Agile software development frameworks are based on a philosophy of continuous improvement rather than working to big project deliverables. There may be big 'epics' that the product team need to deliver, such as adding a new payment method. But agile approaches encourage people to break work down into deliverable chunks rather than have a whole list of requirements that must be delivered before something can go live and the benefit realised.

It is crucial that the value of all change is understood and that only the valuable things are done. Each business will have its own way of assessing value but a standard set of criteria across the board should be used to help identify the requested changes that will best support or enable the delivery of the agreed business strategy.

## 5.5. Roadmaps

If you've got a stable platform that you can make changes to, clear KPIs, an understanding of current performance, a view of your benchmark and competitor performance, and some ideas for what you want to get on with, then your roadmap is what will help you make it happen.

Learning quickly from what you start to do is vital. It's equally important to be able to make changes to the roadmap as a result: doing something really little and really fast, and shaping plans quickly.

"Roadmap" can be a dangerous term if it's the main interface between technology/ecommerce and commercial/marketing teams. In the purest sense, a technology roadmap is a document outlining future plans, which could include optimisations, new product developments, maintenance projects, or entire system re-platforming. The critical mistake most often made, however, is to assume that a roadmap is a timetable: it isn't. Instead, it's a logical path that shows the sequence of different proposed projects and therefore, often, their relative priority to each other.

Roadmaps change. Technology is difficult, and can take longer than expected. New priorities arise, which might change the contents of the roadmap. The terrible inertia associated with larger, over-running IT projects can be partly relieved by allowing developers to adopt agile methodologies so at least regular progress can be made on the top priority at a given time.

But it's also down to a lack of appreciation by non-developers about what is actually involved in building something out of software; agile methods only work if product owners, indeed the whole business, buys into this way of working. Developers have to take some responsibility for this situation too, and avoid binary "yes it can be done" or "no that's not possible" answers to requests where, although true, a positive response could belie the true implications on the rest of the year's work.

If a roadmap is in the main interface between developers and non-developers, then non-developers are only going to feel frustrated when things inevitably get changed or ship later than planned, and developers are going to feel isolated and overworked. The solution lies in mutual understanding, but moreover, mutual goal setting, as well as regular reviews of which aspects of a product's roadmap are being prioritised.

If agile is deployed successfully within the business, it is then the product owner that owns the product's roadmap and manages the feasibility of delivery, balancing business needs, value, and technical ability. It's this role that holds the process together.

Agile methodologies have some terms that are worth noting here:

**Waterfall** is traditionally seen as the alternative to an Agile process: a rigid sequence of tasks that follow one after the other with little room for change. It is problematic in businesses that need to be able to adapt and switch priorities.

**Sprints** are cycles of defined work of between one and four weeks. Every day, everyone involved in the sprint reviews progress in a 15-minute stand-up meeting, and at the end of every sprint, something new is released.

When it comes to shared planning, tools like Trello can help. Each project or feature request gets broken down into component parts on virtual boards that can be moved between columns like Current sprint, Next sprint, Future, or "Icebox" (noted, but not planned any time soon). In its entirety, the contents of a shared project management tool like this offer a better, more realistic view of the roadmap at any given time than something fixed and written that attempts to lock

down the precise timing and order of tasks many months into the future. Further information on Agile methodologies can be found at scrumalliance.org.

## 5.6. Vendor selection

As *section 3.1* explained, ecommerce platforms normally include a front-end element, which is what the customer sees, and a series of servers and services behind it.

Everything might look like it has come together seamlessly to the customer (hopefully…), but in reality, delivering a smooth ecommerce experience involves myriad services all working smoothly together.

Different elements of what the customer sees will be driven by different applications, from the main CMS, to promotions engines, customer reviews and on-site search. Even a simple product page might pull data from different sources: the main web servers and CMS for the page design and layout; a third-party DAM system for the product images, an online video platform to deliver video on the page and even separate pricing and stock availability engines for those specific details.

*Section 3.1* refers to a range of options for hosting and managing an ecommerce technology stack and compares the extent to which the technology components are hosted by the ecommerce business, or provided on a Software-as-a-Service (SaaS) basis. SaaS normally involves every aspect of a particular function being taken care of for a monthly fee, and all configurations and content management being controlled via the provider's platform. At some point the SaaS vendor's software will need to be 'plumbed' into the ecommerce site via an API or via a small piece of code that can, often literally, be copied and pasted into place on the site.

There are SaaS vendors who can provide every aspect of an ecommerce platform in one turnkey solution; equally even the largest and most advanced ecommerce teams still make use of SaaS products for certain features.

Broadly speaking, the market for ecommerce platforms can be divided up as follows:

1. **Vendor (e.g. ATG, Websphere)**

These large, all-singing-all-dancing platforms are generally owned and operated by the world's largest IT companies. Expect to pay in excess of £100k per year for a highly bespoke solution, which includes complete control over design and functionality, and high service level guarantees relating to uptime and bug fixing.

2. **Hybrid (Magento)**

A hybrid approach allows ecommerce teams to choose different vendors for different functions, often within an overarching framework like Magento.

Like a lot of software frameworks, Magento has an open source as well as a hosted entity. Developers can install and configure the open source software on their own web servers, and adapt to any degree they wished.

The Enterprise version (£50k to £100k per year) has the benefit of managed servers, continuous provision of security updates and software patches and a good deal of out-of-the-box functionality, while allowing developers to focus on customising the front-end experience.

## We are running through Magento enterprise

"It's licensed, out of the box, but you can develop customised options on top of it. We have a designer in house who is in charge of the branding, looks after the look and feel of the site as well as all the branding materials across the board.

"Because Magento comes with a framework, most of the work is done. But going down this route can make it difficult to find engineers who have been exposed to different areas, development environment and requirements."

**Paula Abasolo, Head of Operations and Infrastructure, Dobell**

### 3. 'Plug and play' (Shopify)

These platforms are suitable for smaller online retailers, and market themselves on the ability for people to be able to design, develop and manage ecommerce activity with little or no coding experience. Expect to pay a few hundred pounds per month for the complete setup.

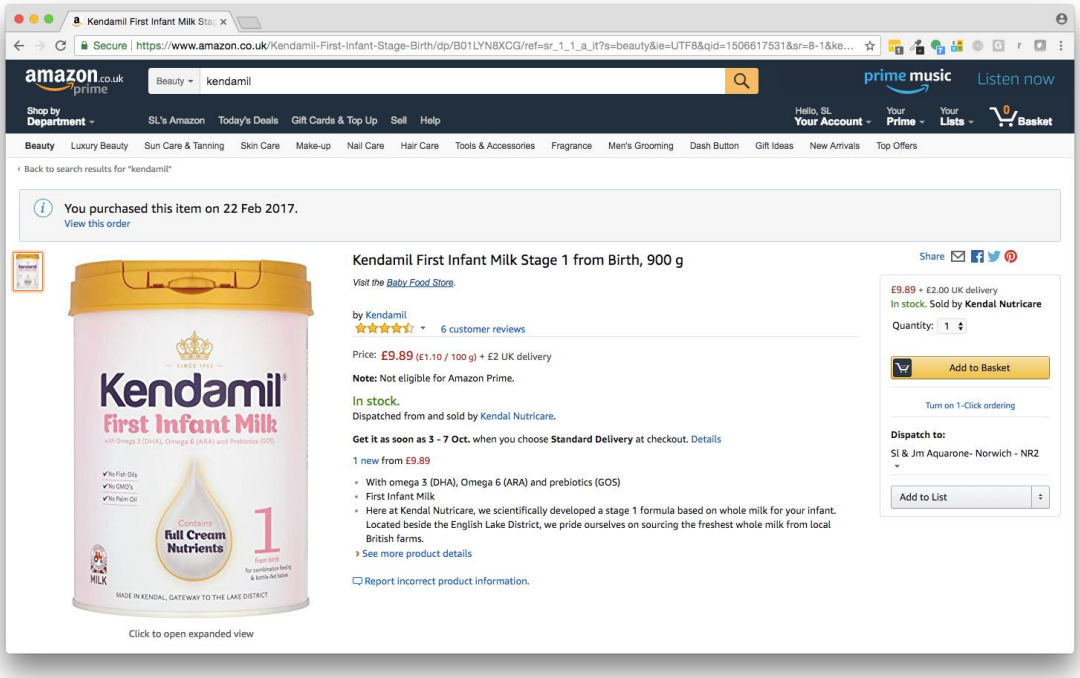
### 4. Marketplaces (Etsy, Amazon, EBay)

The most basic level of online retail doesn't require any ecommerce property at all. Marketplaces like Etsy, EBay and Amazon are used by professionals and niche manufacturers as well as hobbyists, where charges are made as a percentage of sale value.

As well as being low-cost and flexible, and requiring no other operating overhead, these marketplaces also benefit from the scale and reach of their existing customers. In the case of Amazon, the delivery network is such that some customers (especially those that have paid Amazon's £79-a-year Prime membership fee for unlimited free delivery) prefer to buy products there than direct from retailers.

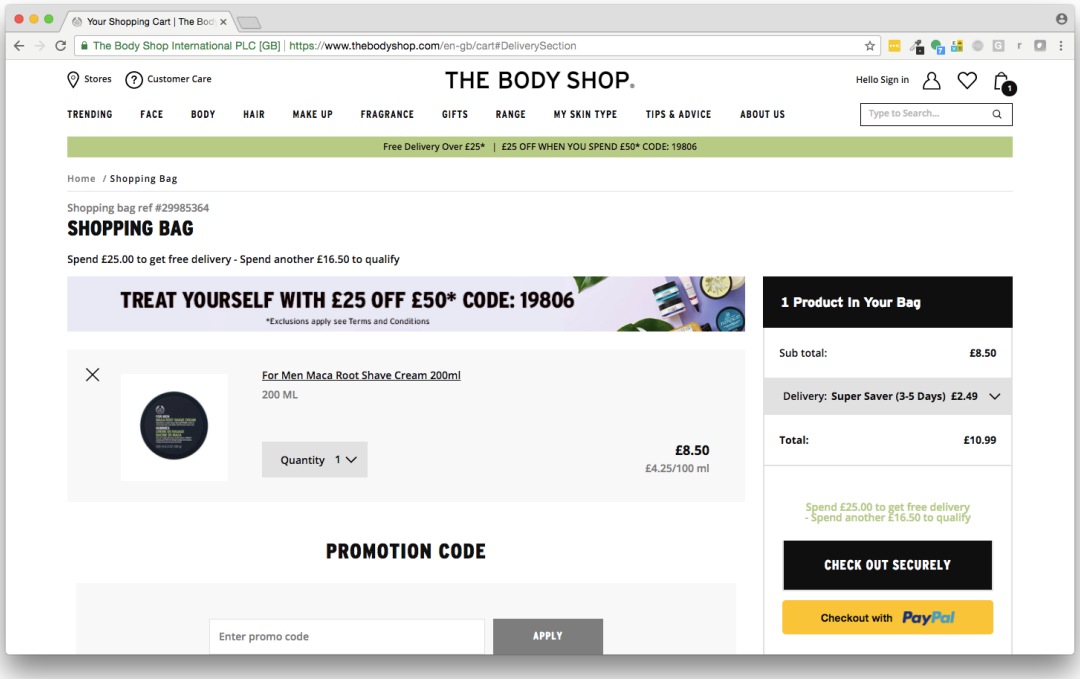
Many ecommerce businesses operate across Amazon as well as their own sites, to ensure consistency and findability wherever their customers prefer to shop. It is not unusual to find a specialist vendor operating an Amazon store as well as their own ecommerce site (Figure 14*Figure 15*).

Figure 15: Kendamil's products are exactly the same price on Amazon as they are direct – even delivery prices are the same




Others leave it to third-party distributors and lose control of price in doing so. Often this means Amazon prices are calculated by third parties to be more than going direct, but less once delivery charges are included (*Figure 16*).

Figure 16: Compared to buying direct from The Body Shop's own site, Amazon Prime members might find that a third-party seller offers the product on Amazon for slightly less once delivery costs are included



### 5. Third party plugins

These take care of single aspects of ecommerce functionality, sometimes because the task requires a different server architecture, or because the task is specialist, or because retailers and customers alike benefit from the network of sites that the plugin is used across.

**Online video platforms** are a good example of plugins that take advantage of different server architecture. Video is one of the largest types of file to be transmitted via the web and most ecommerce sites are served from a small number of locations (including backups and failover environments).

However, this is often insufficient to deliver video reliably, leading to effects like buffering or content failing to load. Online video platforms use content delivery networks to make multiple versions of videos available at points of presence around the web, in order to deliver video content quickly and reliably as well as solving a number of other problems that are caused by different formats, devices and connection speeds.

**Security and anti-fraud** engines are a good example of specialist performance that would be hard to replicate within an ecommerce team. Modern ecommerce retailers face daily battles against potential threats such as:

- DDoS (Distributed Denial of Service Attacks) – attempts to take down a site by swamping web servers with requests.
- Brute-force hack attempts – there are machines that will try to exploit vulnerabilities in server security with methods that are sometimes as simple as guessing email address and password combinations.
- Data theft, particularly theft of personal data – personal data could be stored on separate services with less security than the ecommerce site, but have nevertheless be made accessible via the web so that they can interoperate with ecommerce functions.
- Fraud, including credit card fraud (i.e. stolen cards being used to buy goods), card testing (stolen card numbers being 'tested' on low value purchases to see if they have been blocked) and chargebacks (where goods are sent but then the card issuers withhold the money on account of their customer claiming they did not make the purchase).

As well as the technical protections, ecommerce managers should be aware of the legal and compliance measures that apply to ecommerce, such as PCI Compliance, a set of payment industry security standards that apply to all companies who accept, process, store or transmit payment card information. This is often seen as an IT problem, but it can quickly become a corporate risk if your business is in breach or has a deficient PCI policy.

Using an **outsourced payment gateway** – with a token-based solution, for example – is generally the safest way to go, so that your business holds no payment information and therefore reduces the risk to the business for a small increase in cost.

Even **on-site search** can be better outsourced e.g. Google Enterprise search, or Endeca, which is now part of Oracle. Although it's always the case that without proper tagging and indexing, any search engine's results will be weak, sometimes the best speed and relevance of results can be achieved by working with a search specialist whose external engine would respond to any on-site search queries, and return a list of content or product pages in a structured array that loads directly into the search engine results page of the ecommerce site.

Finally, **review engines** like Trustpilot, Yotpo, eKomi, Feefo and Bazaarvoice are examples where there are benefits to the customer from using third-party plugins. Review engines (which

are explored in more detail in *section 3.2.4*) allow customers to see a cross-section of product reviews drawn from a wider pool; and ratings engines that carry brand recognition could provide a level of trust from social proof that an ecommerce retailer wouldn't be able to achieve on their own.

Whatever your chosen route for software provision, there are some common questions worth asking of all vendors to ensure you pick the right partner and are getting good value for money.

### 5.6.1. Key questions to ask vendors

1. Explain the product capability. How it is relevant to my business?
2. What does the engagement process look like? What evaluation is done to understand my business? Who would you expect to be involved (roles)? How would you communicate with my business, etc.?
3. What is the recommended change plan for implementing this product? What order should each part be delivered in? How will each part be tested and validated?
4. What obstacles do you think we might encounter during implementation? What could be done to reduce the risk?
5. Can you tell me about any similar implementations? (Ask for customer references.)
6. What is the current product roadmap? What new features and improvements are planned? From where did these ideas originate? Why were they prioritised?
7. What are the implementation costs (including any analysis, hardware requirements, etc.)?
8. What are the ongoing costs (any subscriptions/licensing/support/upgrade costs, and the model these costs are based on)? Is it a flat fee? Is it based on number of webpage views, transactions?

**Anybody sitting in my seat is bombarded every day from solution providers**

"Personalisation and AI seem to be flavour of the month at the moment.

"If I happen to have a subject that I'm interested in, I have to work my way through a torrent of potential solution providers.

"A big company might have an RFP, or a complex selection process. We have a 'rough and ready' attitude to shortlisting but we're also looking for different things to a bigger company. First and foremost: a supplier that cares about our business. That tends to mean not going for a Rolls-Royce solution, but instead a newer player, who is likely to be keener and put more work into our account than they might do if they were more established."

**David Kohn, Customer & Ecommerce Director, Heal's**

Ecommerce is a competitive market for software vendors, and ecommerce managers should not be afraid of carrying out probing and detailed cross-examination of potential suppliers.

In turn, the ecommerce team should have a clear understanding of their key metrics, both current and aspired to, such as website visitors, webpage views, suppliers, product records, orders, payment transactions etc., in order to help shortlisted vendors prepare meaningful proposals.

### 5.6.2. Mobile apps

Whenever mobile comes up so does the question 'do we need an app?'. Apps can be very expensive but also very powerful. The question of whether the business needs one comes down to

the customer's relationship with the brand: is it strong enough to encourage them to spend time and valuable phone space downloading your app? And how could an app support the customer's purchase mission? Can it support more than just a purchase by providing another use so it's not just about retail?

Apps that offer genuine utility often draw on specific things that mobile websites can't, such as taking advantage of the device accelerometer, graphics capability or operation offline. A few augmented reality apps have been launched to help customers imagine what products could look like in their homes.

However, in reality, at present, very few retailers' apps offer any utility beyond store locations and linked loyalty points so it's no wonder that, according to Business Insider,[8] users are spending the majority of their commerce-related browsing time in browsers rather than apps.

The ease of browser-based mobile payment options such as prefilling, along with shortcuts like Facebook Login, makes shopping via a mobile browser even easier and less differentiated from installing native apps.

[8] *http://uk.businessinsider.com/the-mobile-checkout-report-how-retailers-and-tech-giants-are-pushing-consumers-12-2015*

# 6. Approach III: Site design

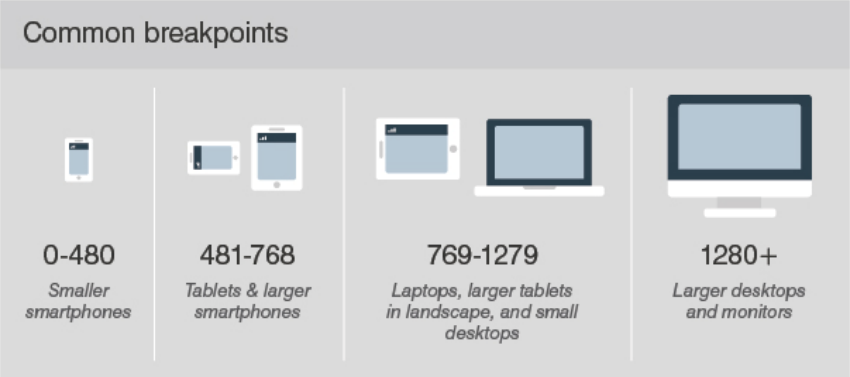
The first thing to remember about best practice when considering site design and build is that there are no rules that will ever apply to everyone. 'Test and learn' is, as in so many subjects, the best practice approach.

Now that mobile purchases have exceeded half of all UK ecommerce transactions, according to IMRG[9], design considerations need to be fluid rather than static. This means thinking about layout in terms of prioritisation.

Ideally, all information and functionality should be available in all views but the order in which information, images and tasks appear, and whether different assets should be prioritised or deprioritised, should depend on the user's likely task hierarchy on different devices. You can find out more about design best practice by reading Econsultancy's User Experience and Interaction Design for Mobile and Web.[10]

Responsive design was widely regarded by our industry contributors as the best practice option. Migrating to a responsive site doesn't mean a complete re-platform: it can be achieved through front-end changes. Responsive design is simply a set of design rules that prescribe page layouts based on "break points" – different browser widths determined mainly by screen size.

Figure 17: Common break points courtesy of builtvisible.com




You can find out more about responsible design and break points in particular at Builtvisible.com.

**Further reading**

**10 brilliant examples of responsive design in ecommerce**
https://econsultancy.com/blog/61824-10-brilliant-examples-of-responsive-design-in-ecommerce

**10 more examples of responsive design in ecommerce**
https://econsultancy.com/blog/62432-10-more-examples-of-responsive-design-in-ecommerce

## 6.1. Ecommerce design affordances

Brand is a key component of user experience, helping to deliver on expectations of style and tone while contributing to the pleasure a user feels when browsing and buying. But given the maturity of ecommerce, there is a fine balance to be struck between design originality and 'affordances'. In

[9] *https://www.imrg.org/media-and-comment/press-releases/over-half-of-online-sales-now-made-through-mobile-devices/*
[10] *https://econsultancy.com/reports/user-experience-and-interaction-design-for-mobile-and-web*

design, affordances are powerful shortcuts that help people navigate intuitively around a site based on rules they've learned from other experiences elsewhere in ecommerce.

The design patterns and site examples shown in the rest of this chapter are a mixture of mobile, tablet and desktop.

Donald Norman appropriated the term 'affordances' from the field of cognitive psychology in 1988 in the context of human-computer interaction, to refer to the apparent actions a user perceives may be taken on an object.

In his famous example, Norman explains that as users, we have learned from past experiences that a door can be opened by pushing or pulling on the handle. As we approach a door we look for visual (and other) cues (or 'affordances') that imply how we should operate the door. Applied to the concept to user interface design: making controls clear, obvious and intuitive is probably number one on the list of things you can do to most improve user experience.

Patterns, too, are a subset of affordances. In UX-speak, a pattern is the layout, interface and function of a website, which is common to multiple sites. There are some well-established design patterns in websites, especially in ecommerce. The screen language used to denote navigation is quite mature, even down to design metaphors like 'My Account' (head and shoulders/the profile picture icon).

Figure 18: Design patterns, which prescribe where core functions like menus, actions and content types are located, help people navigate around a site based on past experience

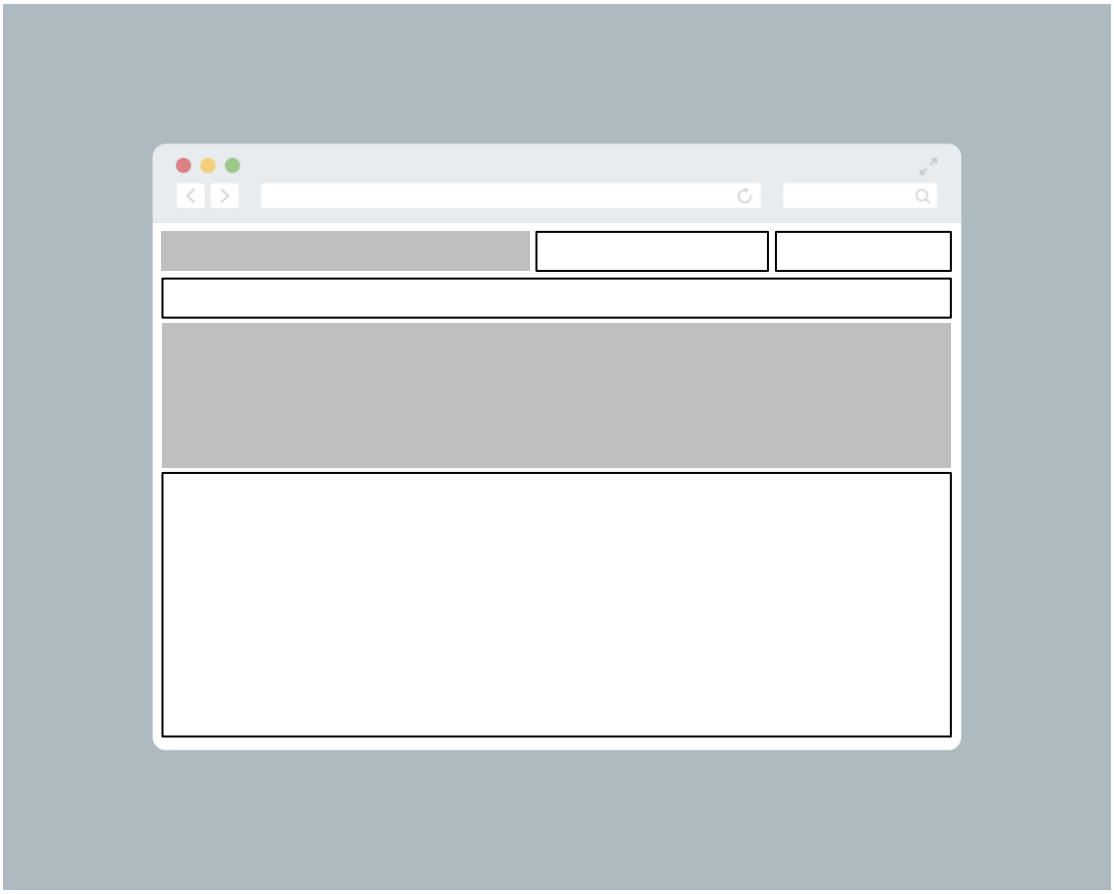


Figure 19: Common patterns include the location of ‘Add to Basket’, ‘View Basket’ and ‘Checkout’ buttons

Even the flow of order confirmation, deliver and payment information entry has an established pattern that people are used to. Breaking the patterns runs the risk of making it harder for people to work out how to get what they want from your site, which could be something as simple and mutually beneficial as completing a purchase. You can find out more about design best practice by reading Econsultancy’s User Experience and Interaction Design for Mobile and Web.[11]

If you choose to deviate from established design affordances, then it’s still possible to establish a consistent set of new patterns within your site. The longer the browsing or research phase of the customer journey, and the more niche and specifiable the product or service, the more tolerance people will have for learning the rules of your system.

Equally, following design rules that are only known by a niche market may help enhance the customer’s perception that “this is the perfect place for me!”. Once established, it’s even more important that new rules are applied consistently across terminology, iconography, functions and layout. All of this will help reduce the time users need to decipher the meaning of controls and labels, and will increase their confidence in your site.

Beyond adhering to – or departing from – established design conventions, when building usable ecommerce sites, it’s important that your overall retail model isn’t too complicated for people to be able to hold in their heads. This includes things like product categorisation, and the range of different routes through the site.

[11] https://econsultancy.com/reports/user-experience-and-interaction-design-for-mobile-and-web

Figure 20: There is a received wisdom that breaking down product categorisation into more than nine options creates too many choices for people


Equally important are consistent header and footer layouts, which should be maintained across every aspect of the site. Including clear markers of where a visitor has browsed on every page will help customers navigate with ease throughout the experience.

The typical design convention for ecommerce site footers is to include everything that's not core to the shopping experience, i.e., part of secondary navigation. This might include contact details, access to delivery information, or anything else that's needed to instil confidence, particularly for the first-time customer.

Trust marks, links to privacy policies and other terms and conditions are typical details to include in a site footer, along with social media links that can provide valuable social proof that this is an organisation the user should do business with.

## 6.2. Search and navigation

One of the most important things an ecommerce website has to be is easy to navigate. As we've seen in *section 4.3*, however, customers come to a site on a variety of different missions, and therein lies the challenge for ecommerce managers.

Generally, **site navigation** and **site search** are the two routes that can best be offered to users to help them find what they're looking for with a minimum of cognitive effort, whether that's browsing or quick product location.

**Site navigation** describes how users find their way around a website by clicking on links, while **site search** is when users type keywords, or sometimes product codes, into the search box.

In general, site search has higher conversion rates, as typing a product name or code into the box indicates that the visitor may have done their research already, and arrived at the site with a clear idea of what they want to purchase.

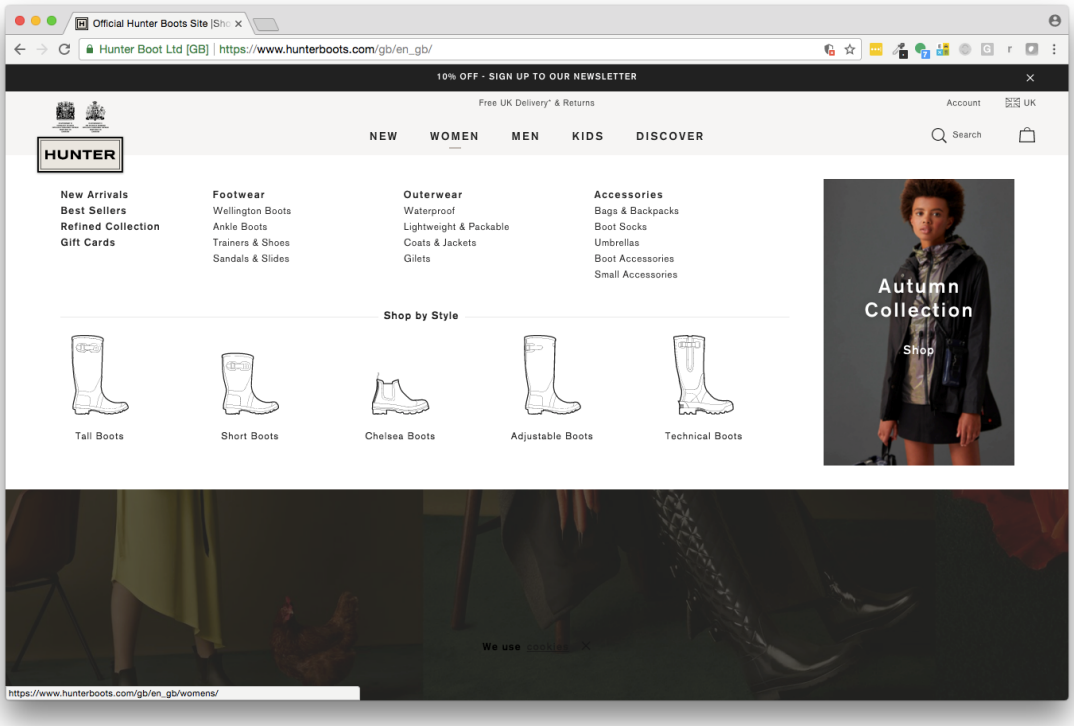
Ecommerce managers sometimes make the mistake of being too heavily guided by commercial teams, who know the product well but are not necessarily familiar with the state the customer arrives at the site in. They may have a surprising range of questions, or an unexpected level of knowledge (more or less) about what they're looking for. When designing search and browse functionality, nothing beats a detailed understanding of how people buy your products and services.

Below are some examples of site navigation and site search.

## 6.2.1. Drop-down menus

Here, bootmaker Hunter has used outline images as short hand category selection, rather than trying to explain a set of footwear classifications that might be unfamiliar to customers, even if they are bona fide fashion industry terms:

Figure 21: Hunterboots.com's use of line images to illustrate different types of footwear




Menus that require interactions such as hover states that are not native to mobile device interactions are to be avoided unless appropriate alternatives are built responsively into the site's mobile layouts.

Drop-down menus are, however, a useful way of letting users take shortcuts to the product category or sub-category they are looking for, and the 'burger menu' is a popular way of adapting larger menus for mobile browsing – although not without debate.[12]

Figure 22: Americangolf.co.uk uses a pop-up menu on desktop…

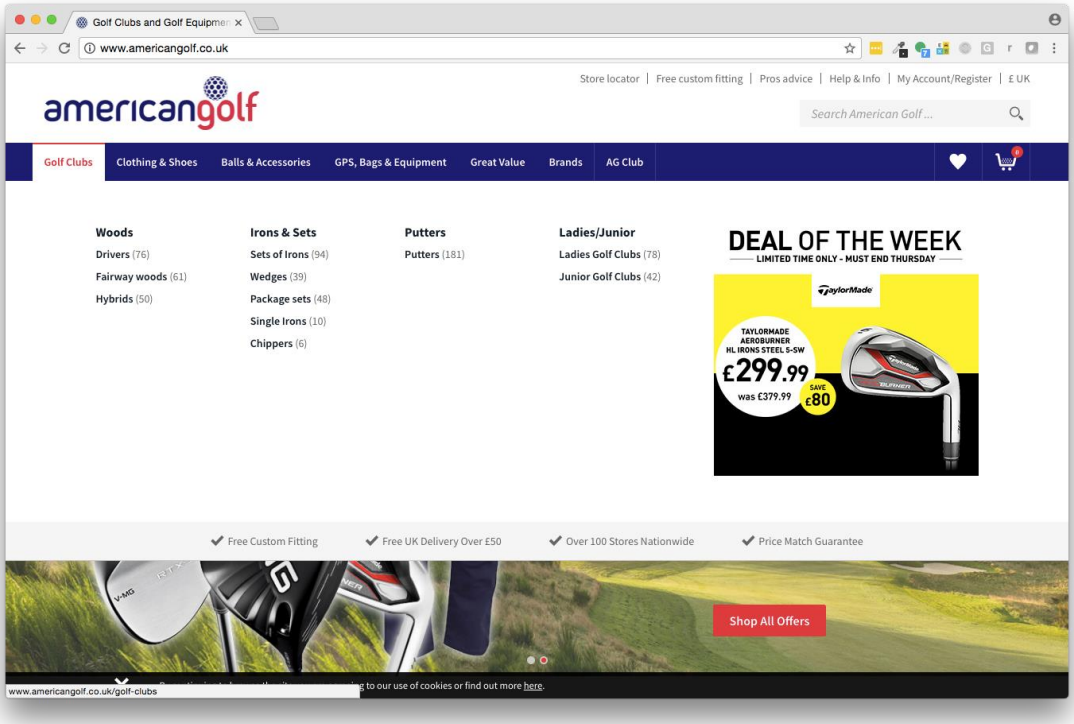
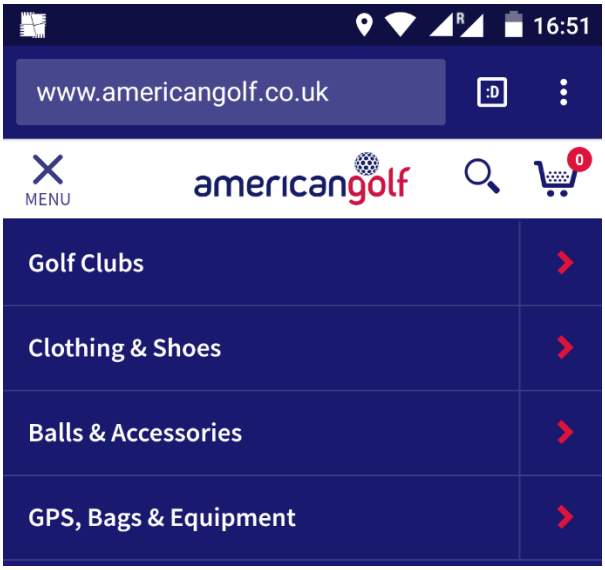



Figure 23: …but reverts to a 'burger' menu on mobile


[12] https://www.econsultancy.com/blog/68673-five-apps-websites-that-ditched-the-hamburger-menu

Figure 24: Americangolf.co.uk mobile site with ‘burger’ menu engaged



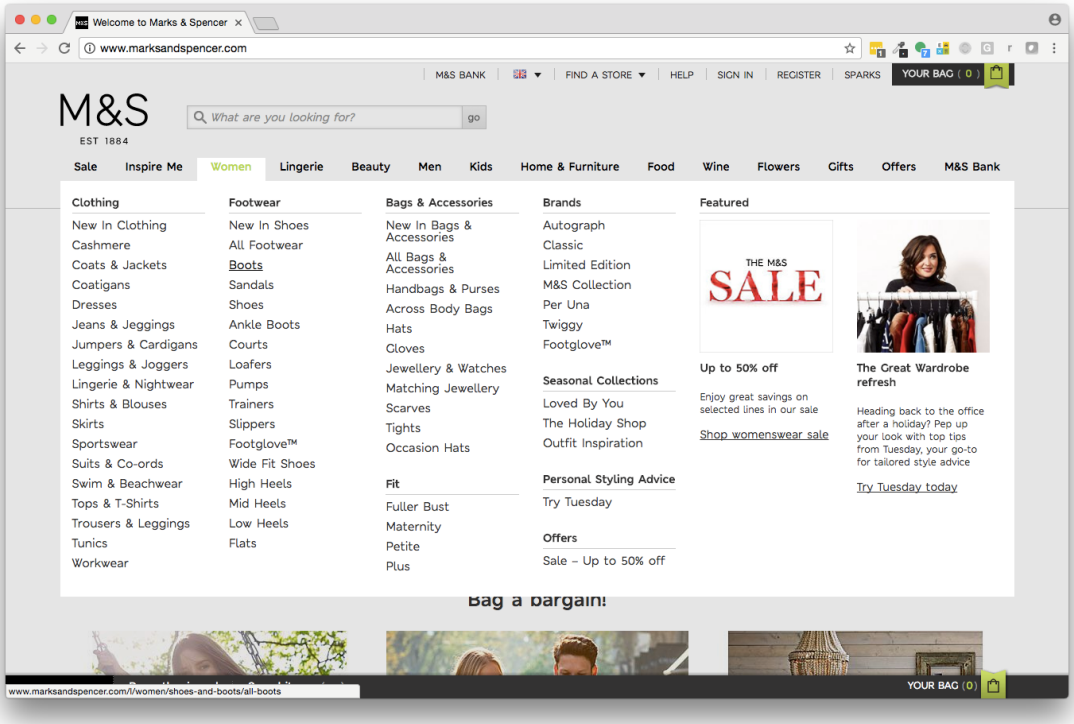

Making menus clickable rather than hover state solves the issue of mobile usability, and could also help prevent disappearing menus for desktop users who happen to move their mouse accidentally out of the area of the menu while trying to choose from its contents. Alternatively: for desktop users, providing a lag time before a menu either appears or disappears is a solution that avoids accidental initiation too.

### 6.2.2. Mega drop-down menus

Although excessive categorisation or simply being shown too many options can still overwhelm users, well-categorised mega menus can provide a powerful shortcut to customers who know what they’re looking for.

If the catalogue is big enough and the categorisation meaningful to users then megamenus can be faster even than searching, a bit like going straight to right the aisle of your local supermarket when you know exactly what you’re after.

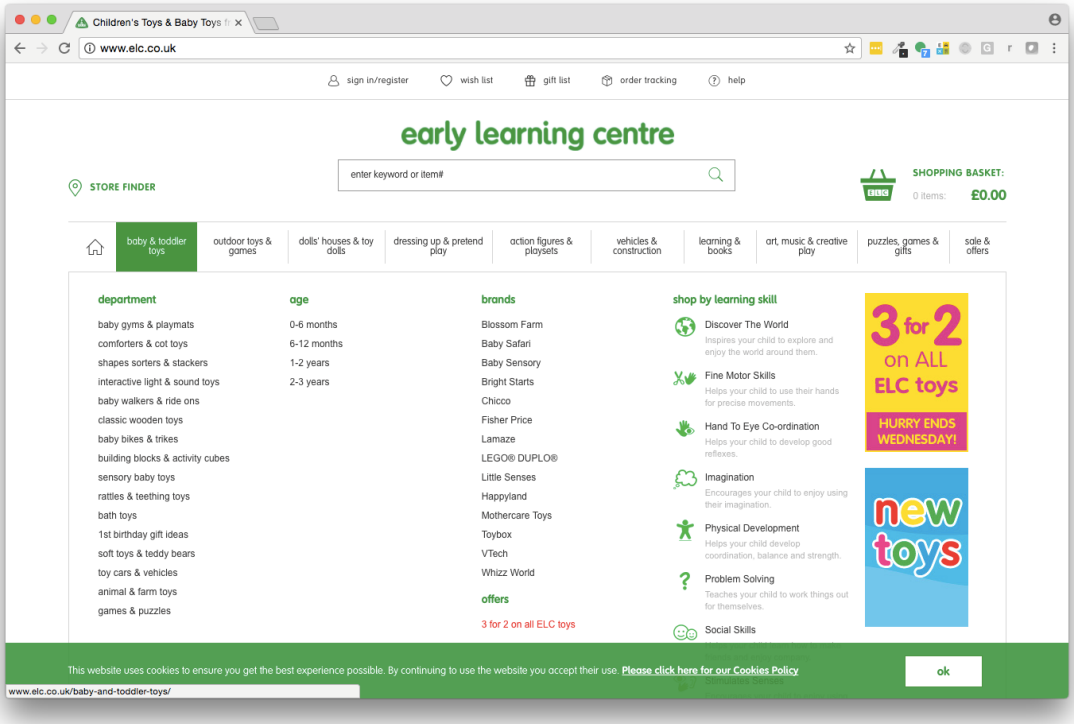
Figure 25: Marksandspencer.com's mega menu




The key to successful mega menus – and navigation menus in general – is taxonomy. This can be aided by carrying out **card sorting exercises** with a mixture of people from within the business and customers from outside the business. In a card sorting exercise, participants can either be allowed to choose freely the categories that they feel best group products together, or are given guidance by inviting them to place different products into predetermined categories.

Mega menus have the additional advantage of **letting ecommerce retailers merchandise menus** by offering the most popular categories at the top and on the left of the drop-down, where they are most visible (most eye-tracking research supports the idea that users start by reading across the top of a menu and then look down the page a little and read across again and then continue down the left side) or providing space for promotional messages.

Figure 26: elc.co.uk merchandises the mega menu to remind visitors of a time-limited sale offer




Clear headings and logical use of columns can further improve the usability of mega menus, but they remain a no-no on mobile (most rely on Ajax or JavaScript) and responsive sites should deprecate them altogether for mobile and prioritise search or other assistive functions instead.

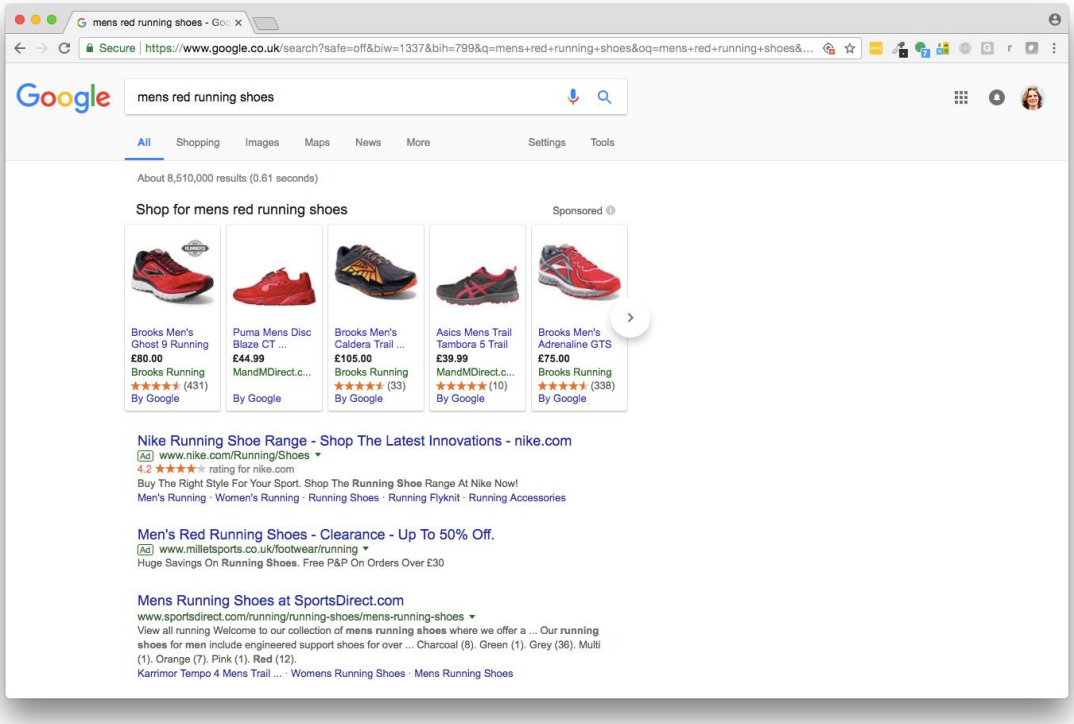
The fact that conversion on mobile remains generally low, despite the fact that many retailers will see at least half their traffic coming from the device, suggests there is still a way to go to improve mobile usability, especially around payment processing, as *section 3.2.10* explores further.

## 6.2.3. On-site search engine

When a user arrives on a site knowing exactly what they want, site search is surely the solution. It offers a degree of immediacy that is impossible to replicate in the brick-and-mortar world, and can lead to the fastest conversions on ecommerce sites if it's done well.

In some ways, Google has made it almost impossible to meet user expectations when it comes to site search. The speed and relevance of a search engine that's got two decades of expertise behind it – not to mention $50bn of annual revenue – is hard to beat.

Figure 27: Don't forget that Google Shopping is already performing a product search function that could bypass ecommerce site search altogether




Google Shopping can be good in that it takes customers directly from the Google search engine results page to the product page on your site, but it can be problematic if the user is still in research mode and bounces back to Google rather than staying in the retailer's ecommerce environment.

The uncomfortable truth is that Google's proficiency has set expectations for search that need to be met at a basic functional level at least. Done badly, search could undermine the entire credibility of the brand proposition. Meaningless results, in particular on search terms that are obvious or popular, can only really be avoided by regular search tuning (*section 7.2.3*) but the remainder of this section will briefly explore some best practice examples in site search design.

## 6.2.4. Search box

Site search boxes should be available in a prominent position within the permanent navigation throughout the site so they're always on hand throughout the customer's browsing experience.

Figure 28: A typical pattern is for search boxes to appear at the top of the site, towards the centre of the masthead


Position the search box away from other boxes that could cause it to blend in accidentally, and consider carefully the language used. Using 'search' rather than 'go' for the action button can help make functionality even clearer, or simply relying on a design metaphor like a magnifying glass (*Figure 29*).

Figure 29: Amazon's site search allows category selection prior to entry, and uses a magnifying glass as the action button


Pressing "Enter" should have the same effect as clicking on the action button.

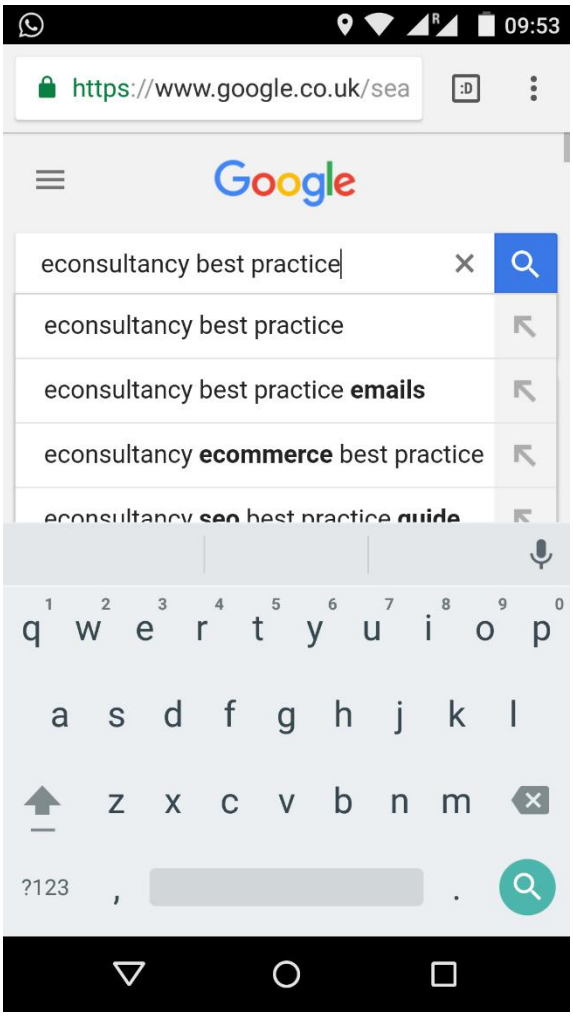
Likewise, putting prefilled grey text in the search box can help explain the function of the site search in plain language, for example "What are you looking for?", or even more simply, "Search".

Although "Enter product or item number" explains to people some of the functional properties of search, it feels a bit distant from the natural-language approach to search that has been driven by Google and others over the years. You wouldn't walk into a store and say "I'm looking for item number…". Besides, as many design leaders have said: "If it needs instructions, it doesn't work."

## 6.2.5. Suggested search results

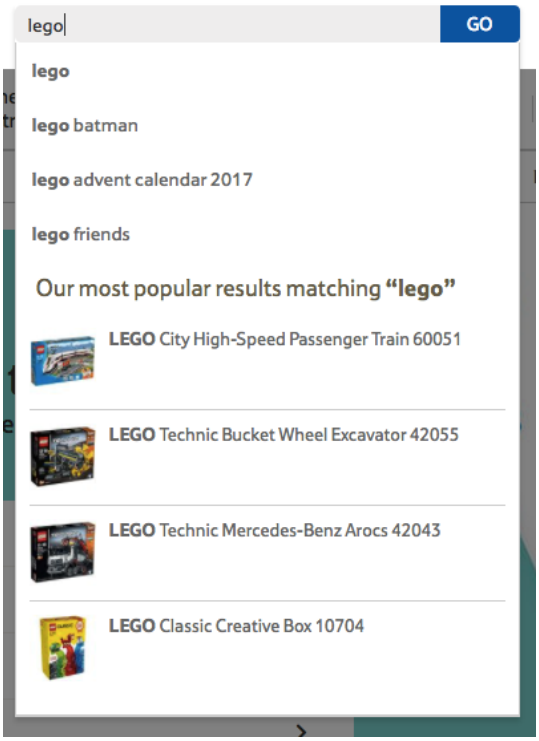
It's reasonable to assume that a particular convention adopted by Google with regards to search behaviour will quickly dominate 'affordances' for users.

Figure 30: Auto-complete or suggested-search results are handled by Google in a pop-up below the search box – even on mobile



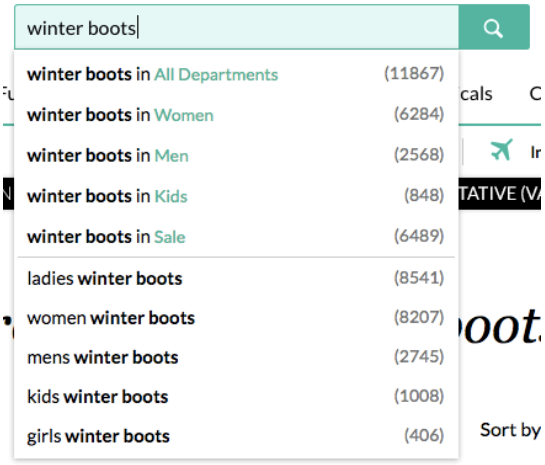

On-site search can take advantage of images and other information to increase the chances of a user seeing the exact product they're looking for, before they've even completed their query (*Figure 31*).

Figure 31: As this example from Tesco Direct shows, suggested search can also help take people directly to the product page if they have entered a product or catalogue number




When categories contain too many entries, or the perceived goal of the user is to be able to compare several products, suggested search results can return options to refine by category rather than click straight to a product.

Figure 32: Debenhams.com gives the option of refining search results by category




## 6.2.6. Search results

At some point, users will want to see a set of results on a search engine results page, and a lot of an ecommerce site's performance depends on search tuning (*section 7.2.3*).

Nevertheless, there are some guidelines that need to be considered in the design and build phase.

**Speed** is a crucial factor. In 1993, Jakob Nielsen wrote about the three time limits[13] for users interacting with software:

- **0.1 second** is about the limit for having the user feel that the system is **reacting instantaneously**, meaning that no special feedback is necessary except to display the result. This is the sort of speed at which suggested search results need to appear.
- **1.0 second** is about the limit for the user's **flow of thought** to stay uninterrupted, even though the user will notice the delay. Normally, no special feedback is necessary during delays of more than 0.1 seconds but less than 1.0 second, but the user does lose the feeling of operating directly on the data.

There are examples where developers have deliberately delayed delivery of search results to create a sense of 'deep contemplation' on the part of the machine, but as effective factors, these are rare. If your site search engine is going to take longer than a second to return results, it might be worth using a placeholder graphic to show that content is on its way (see Econsultancy's User Experience and Interaction Design for Mobile and Web[14] for more guidance).

**Relevance**, furthermore, is the single factor that will make your site search a helping hand rather than a confidence destroying distraction.

Search has two background functions: indexing information that is queried when someone carried out a search, and determining the order of the results on the search results page by use of an algorithm.

The power of algorithms to return relevant results is what keeps Google in the number one top spot for search worldwide. Thousands of engineers make hundreds of changes a month to the Google algorithms that determine the order of the search engine results page.

This might seem like an unfair comparison, but while Google has billions of pages to index, a typical ecommerce site might only have a few thousand product lines, and can apply a significant amount of oversight to indexing for completeness. Plus, a site-search team can rely on formal data structures to tag pages and manually populate the search index with relevant data unlike Google, which is constantly battling against SEO specialists trying to game their algorithms. But it should be clear whose job it is to tag and populate page listings, and ensure standard conventions are applied throughout.

After your index has been populated, selecting the product attributes that are most relevant to prioritise in how the algorithm determines the order of the search engine results page will help ensure the likeliest matches for the users' queries appear at the top.

There is another function of site search that doesn't appear often in web search: the genuine desire to see *all* products that match a certain word or phrase. You'd never realistically want to see all websites that match a phrase in Google, as you'd spend the rest of your life reading. But a customer might genuinely want to see all the "Ella's Kitchen" products that are available, in order to choose between them.

In this situation, resorting to displaying category listings might provide a better user experience. Your site search could either choose to display the entire contents of a category, if the search phrase matched a category name. Or it could offer a 'soft' category at the top of the search results – for example:

"Did you want to browse all **women's winter shoes**?"

[13] https://www.nngroup.com/articles/response-times-3-important-limits/
[14] https://econsultancy.com/reports/user-experience-and-interaction-design-for-mobile-and-web

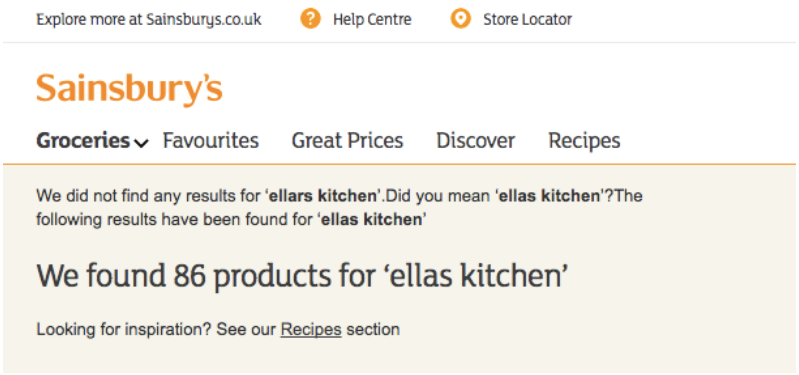
These ‘soft’ categories don’t need to be linked to from the main navigation, and could number many more than you would fit into a mega menu. Multiple versions could even be created in order to curate search results better.

**Search operators** are another tricky one. What do people really mean when they type in “women’s winter shoes”?

It’s a long time since users were willing to use Boolean searching where operators like AND, OR and NOT help refine search by combining or limiting terms, so ecommerce managers need to make sure their site search can do the guesswork. A multiple word search query might contain clues as to broad category choices (e.g. “women’s”), colour choices or adjectives (e.g. “winter”) and product descriptors that might have synonyms (e.g. “shoes”, where site search would likely need to return results for what are technically boots too). Inferring operators is covered in more detail in *section 7.2.3*.

Finally, **misspellings**, especially for travel destinations, clothing brands or people’s names, can also benefit from suggested corrections in the auto-complete feature, not forgetting the increased likelihood of phonetic misspellings caused by increases in voice-based text entry.

Figure 33: Sainsburys.co.uk suggests search terms based on misspelt command




Delivering relevance in search engine results pages is a huge task and more can be learned about how search engines operate in general in Econsultancy’s SEO: Best Practice Guide.[15]

Other considerations for building the logic of your site search include:

- What weighting should be given to matched brand names (including misspellings) vs. other words in the search query?
- At what point should you limit lengthy search results and drive people towards refined or alternative searches until they have a meaningful comparison set?
- Should other factors like price, availability, bestseller status, reviews, return rate, date added and recent popularity add weight to the order of results on the search results page, whether explicitly or otherwise?

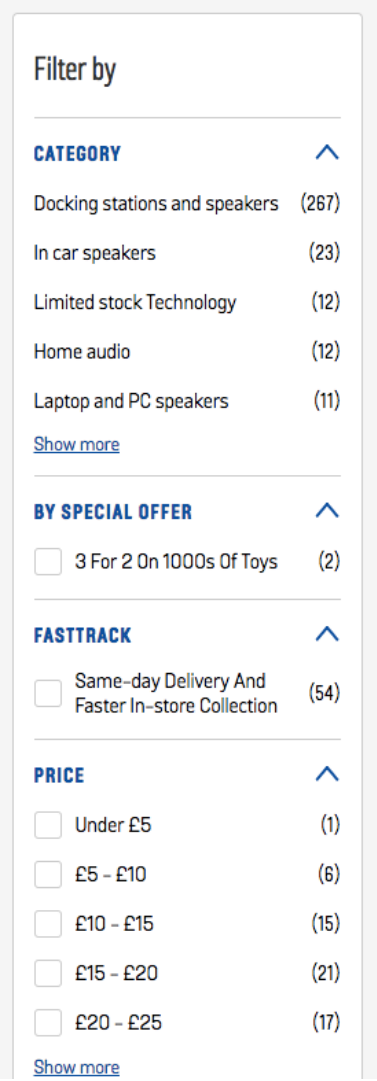
## 6.2.7. Filters

One way of prompting the user to give more indication of what they’re looking for is to make filters available on the search results page.

[15] https://econsultancy.com/reports/seo-best-practice-guide

But filters must be relevant to the selection process. In some purchase decisions (say, electrical), brand will be a valuable filter; whereas in "wood screws", more appropriate filters would be to do with size.

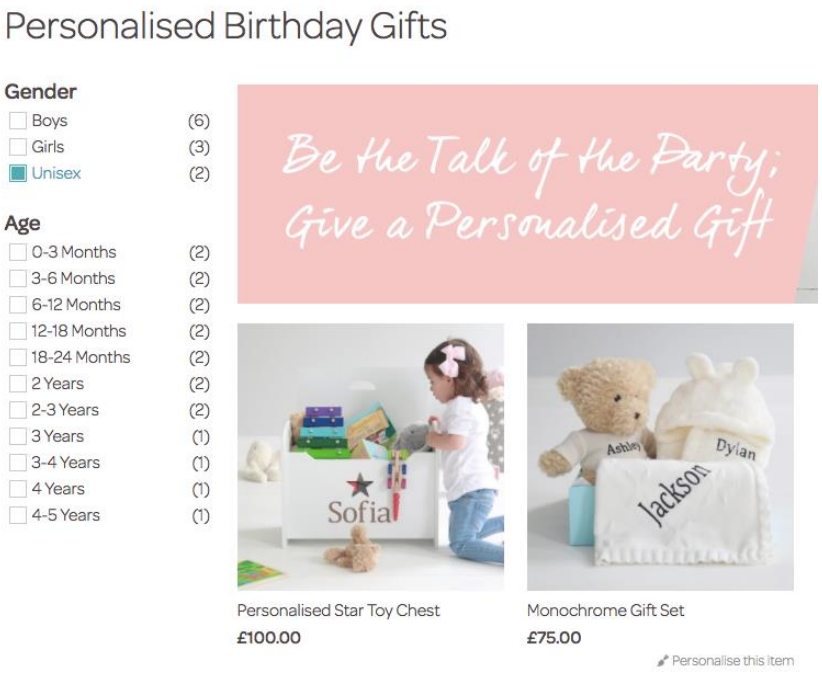
Figure 34: Argos.co.uk offers meaningful filters, including promotions




The most relevant filters to offer are as much a function of user intent as they are refinements on the particular search query that's been made, and again, search tuning has a big part to play in improving the performance of filters.

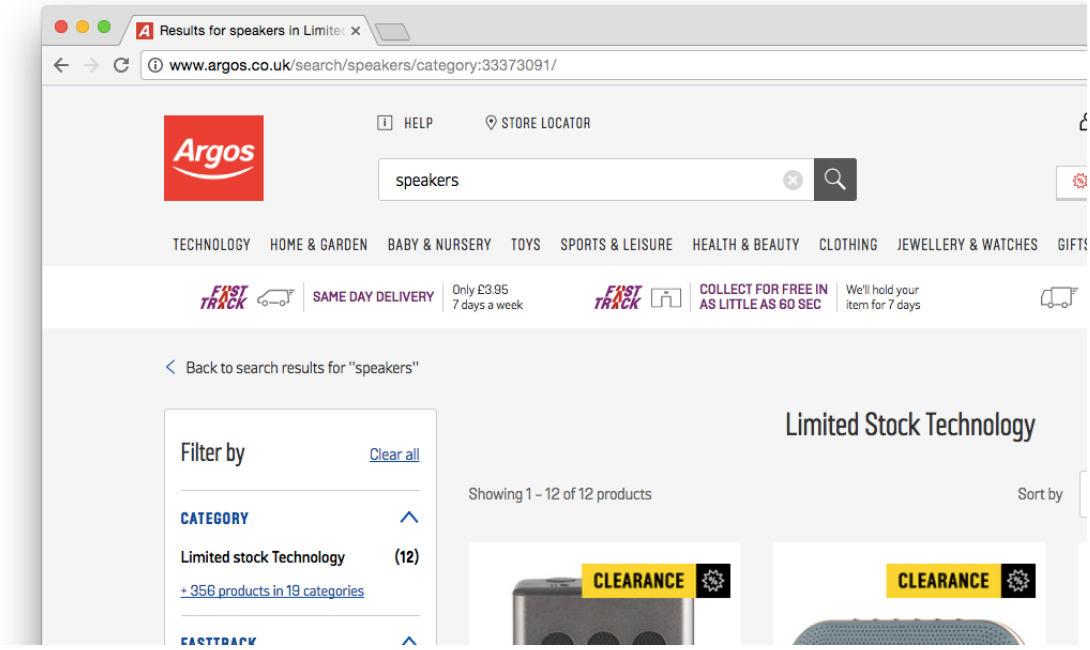
Showing too few options within filters is an issue to watch out for. In *Figure 35*, the site has a homepage feature where users choose occasion, gender and price but returns only two results for 'Over £50' and has no way to amend the price filter. What if the user wanted to spend over £50, and would consider multiple items?

Figure 35: Example of too few options within a filter




Navigation needs careful thinking around the search results page too: if a user has scrolled through a series of pages of filtered results and clicks on a product page, they should be taken back to the same place in the filtered results if they click 'back' – not back to the top of the list, let alone the unfiltered set.

Figure 36: Argos.co.uk makes it clear where the user will be taken 'back' to, and the browser back button behaves in the same way




Similarly, if a search returns long list of results, even with filtering, then being able to access and tweak the filters from anywhere down the page is important, otherwise users are forced to scroll all the way back to the top.

It's worth considering which filters need to be 'multi-select' – i.e. where more than one attribute can be selected at a time. This isn't relevant to all filters and can have SEO implications if it results in duplicate pages with the same content, such as if filter values were selected in a different order but resulted in the same results.

Finally, deprecating filters whose selection would return zero results helps ensure a customer can never select a filter combination that results in no product options.

Simple usability experiments during the design testing phase of ecommerce site design can help set your search architecture up to work best for your customers.

## Further reading

**How to avoid duplicate content issues in ecommerce**
https://econsultancy.com/blog/61802-how-to-avoid-duplicate-content-issues-in-ecommerce

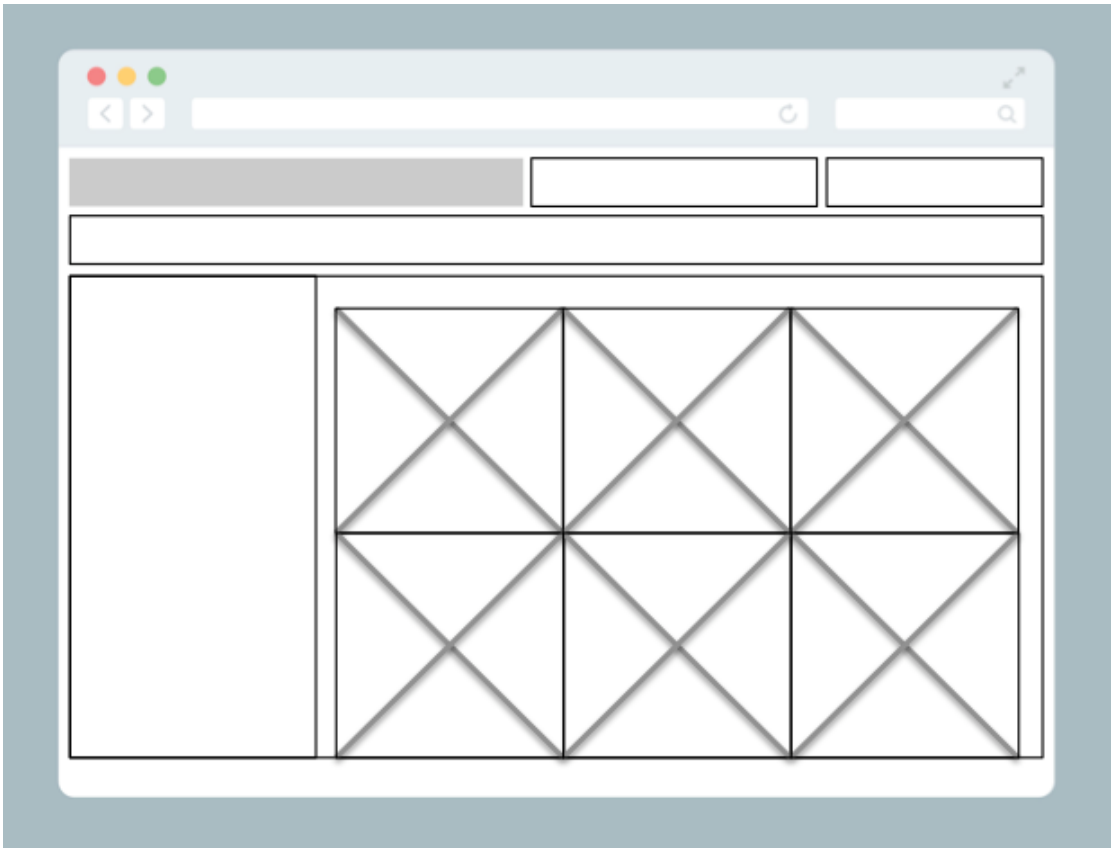
## 6.2.8. Search results page design

Although the weighting of different types of information will depend on the products on offer, there are some established design patterns to help make using a site search results page easy.

Some of the following factors will have the biggest impact on the design and layout.

What's more important to compare – **price or appearance?**

Figure 37: If visual appearance is the main comparison, then tiling thumbnails will help users compare easily



In these cases, a **hover** or **single-tap action** should reveal some further details temporarily. Any information that is 'hidden' like this needs to be obviously accessible, and the way this is displayed (and the action it requires) will likely need to depend on device.

This additional information should be useful but not critical – core shopping journey information should not be hidden in popups or rollovers. Ultimately it comes down to how obvious is it and is definitely something you should user test.

Figure 38: Heal's fits a large amount of information into product comparisons including price, discounts, delivery times and colours, even a wishlist button, without cluttering the page

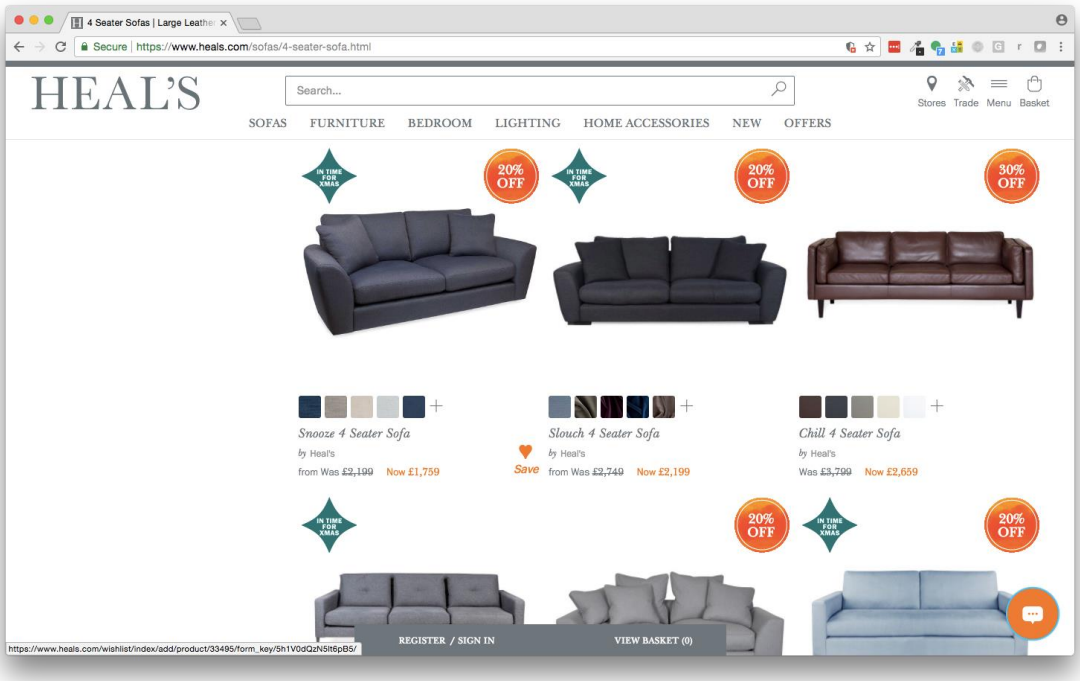


Figure 39: Although it's not labelled, New Look's mobile site mirrors the functionality of the desktop, allowing users to swipe between images of a product without leaving the search results page

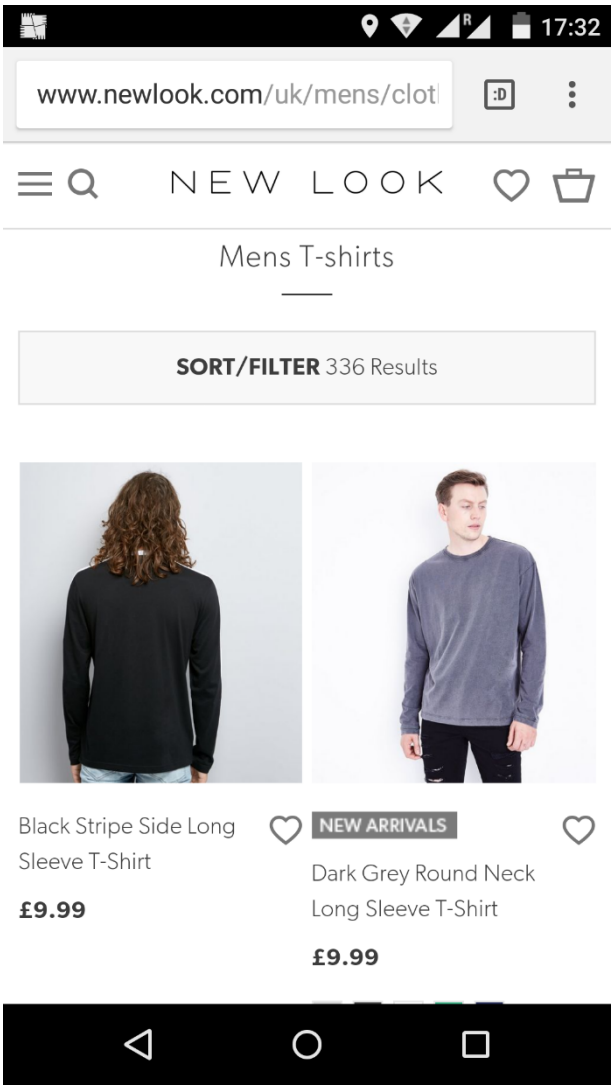


Figure 40: Halfords' 'Quick View' button on each product listing offers a pop-up with summary information without navigating away from the search results page

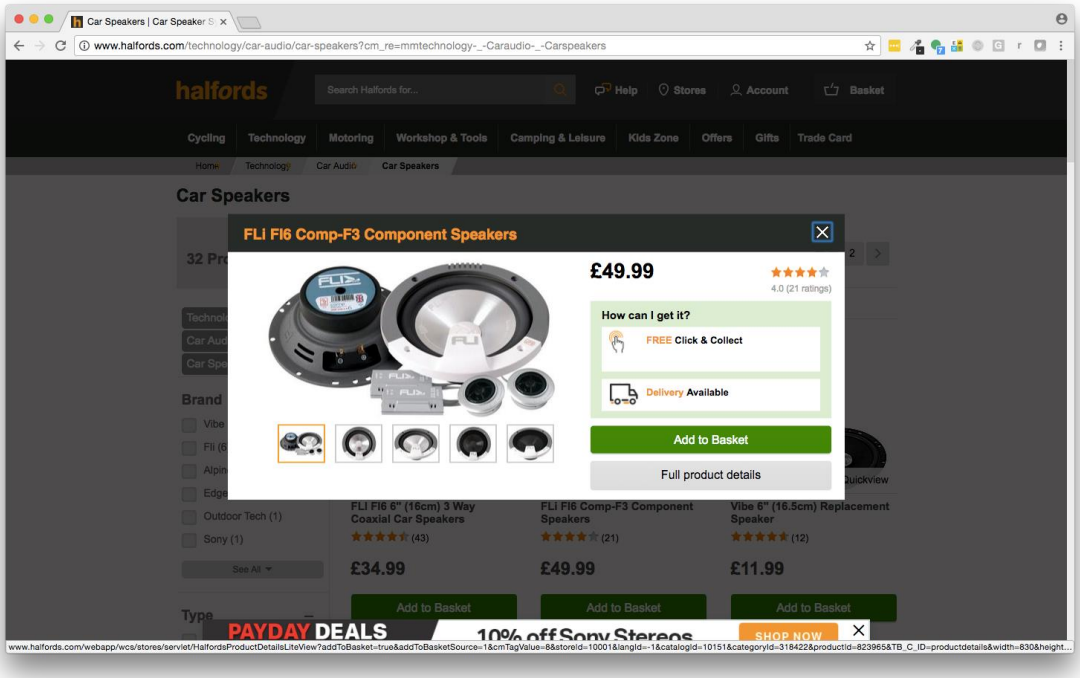


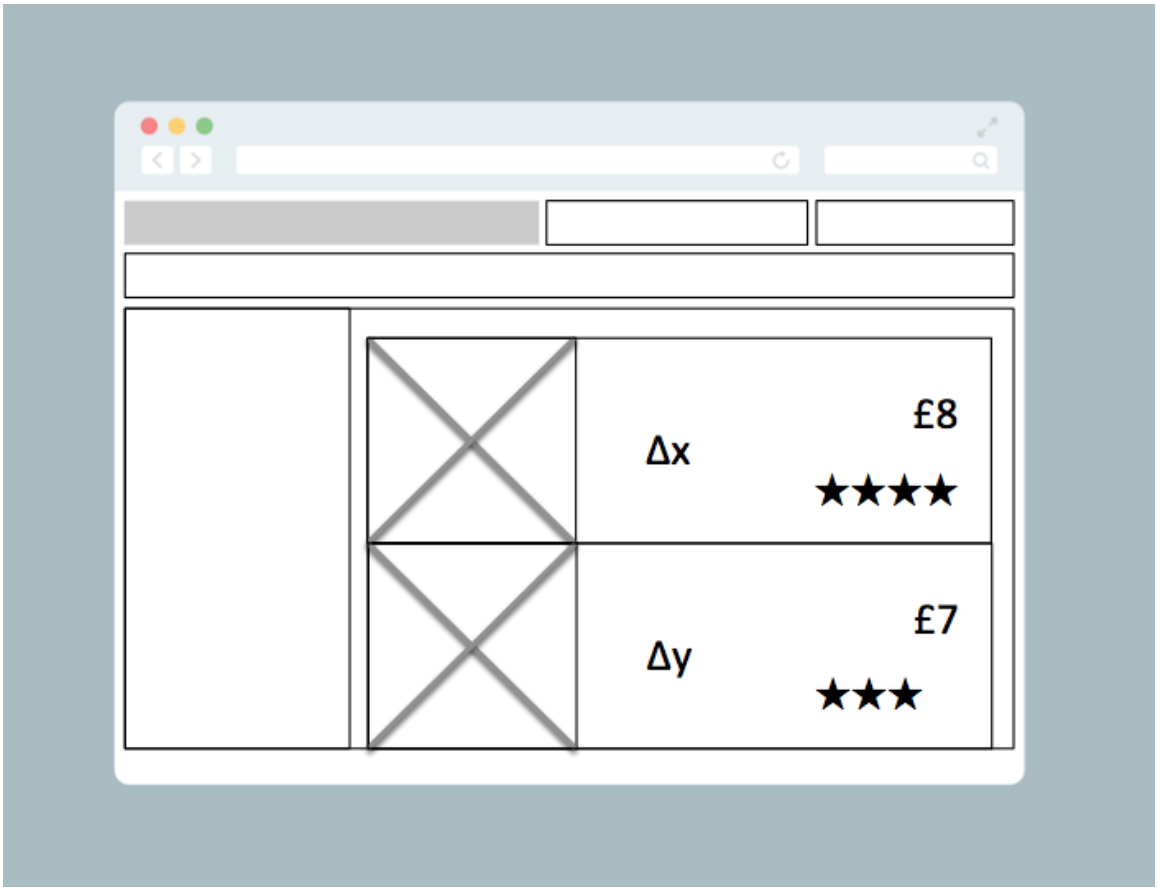

Figure 41: Simplyhike.co.uk's hover state option on desktop shows meaningful alternative 'sides' to products


If price is a crucial comparison, consider delivering search results in a vertical list so users can quickly compare items. If there are more details that require comparison, adding these at the same position along the horizontal design will help people compare multiple variables.

For product comparison, it is even more important to understand what attributes are most useful to the customer and ensure that data quality is very high. There are a lot of sites with product comparison features, but the only thing you can really compare with these features is the photo and the price and you could have just done that on the search results page.

When offering multiple products for comparison, don't forget it's just as important to allow users to choose the normal 'sort by' options such as price, stock availability, customer ratings or other comparisons.

Figure 42: Consider delivering search results in a vertical list so users can quickly compare items




Why not take advantage of the 'swipe' interaction, made famous by Grindr and Tinder, to let customers on mobile quickly refine their search results by swiping left or right to keep or remove options in the list?

This could help people narrow their selection from within the search results page, or enhance the accuracy of the results by changing as yet unseen results on the fly, so long as users had an easy way to go back to anything they'd previously discounted. (People can only hold so much in their heads at one time and may find that once they get into the specifications, the item they were originally interested in doesn't meet their requirements and they end up going for an option they'd previously discounted.)

There's no reason why a large retailer couldn't design different types of search results page for different product categories, or experiment with layouts for different types of search depending on performance.

The choice of what information to include in search results pages should be informed by users' search goals and the weighted importance of different factors in helping people narrow down

their selection. Consider offering a product comparison feature that lets users select a smaller number of products for detailed comparison if more than three pieces of information per product are required.

Finally, if no products are found then consider offering users an alternative choice. For example, a strict brand search may yield no results, but other options might be available. "Zero results" pages are an important source of insight for search tuning – see *section 7.2.3*.

### Further reading

**24 best practice tips for ecommerce site search**
https://econsultancy.com/blog/66658-24-best-practice-tips-for-ecommerce-site-search

**Ecommerce product filters: Best practice tips for a great UX**
https://www.econsultancy.com/blog/68222-ecommerce-product-filters-best-practice-tips-for-a-great-ux

**What fashion and beauty retailers can teach you about site search**
https://econsultancy.com/blog/62283-what-fashion-and-beauty-retailers-can-teach-you-about-site-search

**How visual search is helping ecommerce brands**
https://econsultancy.com/blog/68984-how-visual-search-is-helping-ecommerce-brands

**Image recognition in ecommerce: Visual search, product tagging and content curation**
https://econsultancy.com/blog/69460-image-recognition-in-ecommerce-visual-search-product-tagging-and-content-curation

**50 'No Results Page' Examples**
https://baymard.com/ecommerce-search/benchmark/page-types/no-search-results-page

## 6.3. Product pages

There are lots of different ways to build product pages, and the amount of information required to qualify a purchase will vary hugely depending on the type of product or service concerned. It's nevertheless important to remember that lots of information like photos, customer reviews etc. are secondary to the simple rule that product pages should be **easily scannable**, and **very clear** about availability, price, and purchase options.

The product pages are the likeliest point for conversion in the ecommerce journey and their design patterns are mature: standards include photos in the top left, 'Add to Basket' buttons in the top right (on desktop) or title > photo > price > availability (on mobile).

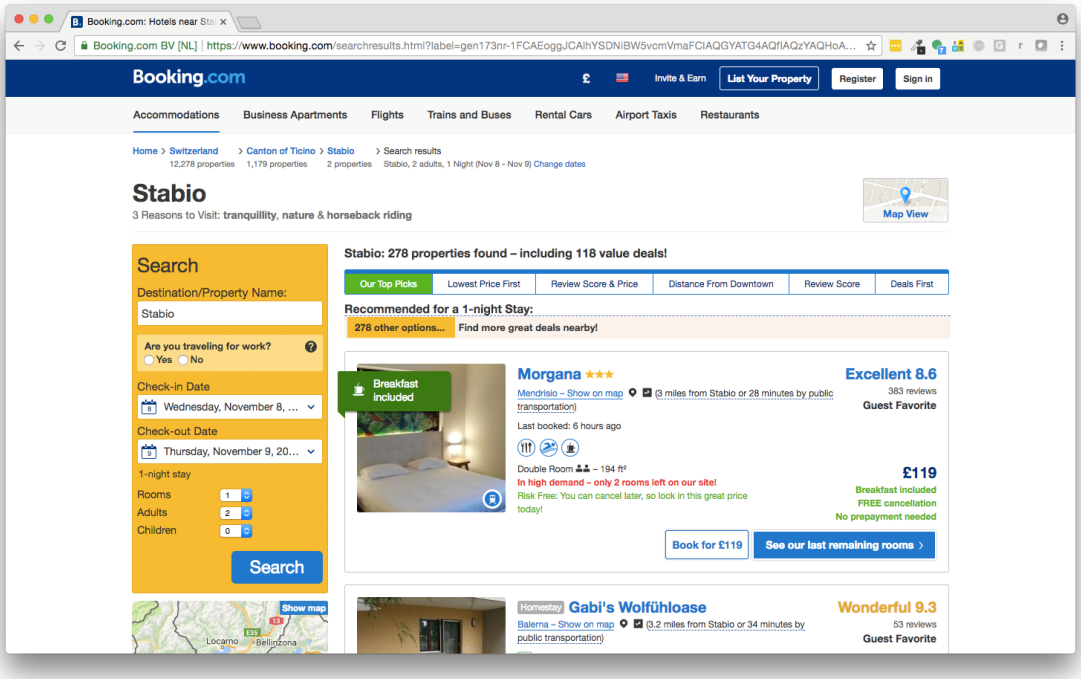
There are, however, several design principles that can be applied to persuade people to purchase there and then – see Cialdini's often cited Influence: the Psychology of Persuasion[16] for more.

[16] *https://www.amazon.co.uk/Influence-Psychology-Persuasion-Business-Essentials-ebook/dp/B002BD2UUC/ref=sr_1_2?ie=UTF8&qid=1506608339&sr=8-2&keywords=cialdini*

Figure 43: “Secrets from the Science of Persuasion”[17]


Some of the most transferrable ‘principles’ of persuasion cited by Cialdini have become part of the recognised design patterns in different sectors. Experienced web users might even be surprised to visit a hotel comparison site without being informed about how soon the room stock was going to disappear for their chosen dates.

Figure 44: Example of the notorious 'scarcity' technique from Booking.com ("In high demand – only 2 rooms left on our site!")




The precise execution of different techniques of persuasion can lose its efficacy if done too bluntly. The success of product page design is therefore about striking the right balance between conforming to established design patterns, using acceptable persuasion techniques that aid user decisions as well as sales conversion, and ensuring enough character and tone of voice to make the experience feel ‘owned’ by the retailer.

[17] https://www.youtube.com/watch?v=cFdCzN7RYbw

## Further reading

**11 great ways to use social proof in ecommerce**
https://econsultancy.com/blog/62602-11-great-ways-to-use-social-proof-in-ecommerce

### 6.3.1. The fold

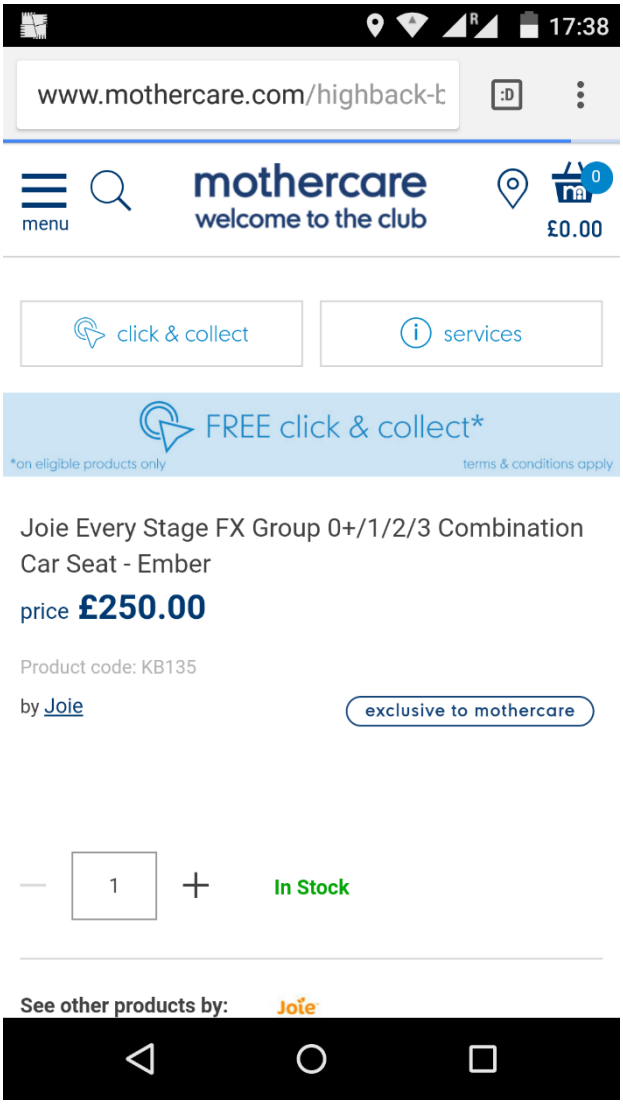
The typical design pattern for product pages puts product name, image, sub details, price, availability and then the 'Add to Basket' button in the area above the fold on desktop (or on the first visible screen on a mobile device).

Below this, users will expect to find more details such as product specifications, user reviews, delivery details, etc. Analysing the usage of this additional information, and the impact on conversion of varying the sequence of information, could provide valuable insight into customer behaviour and could even drive information hierarchy decisions elsewhere on the site, such as on search results pages.

Retailers may use customer insight to vary the usual flow of key information on the product page in order to respond to quantitative or qualitative feedback from customers, or customer behaviour.

The Mothercare app and mobile site (*Figure 45*) have different layouts for the product page. It's possible that Mothercare reasoned that typical customers for prams and car seats (who weren't loyal enough to have the app) were clear about the brands they were considering, and cared most about looking for the best price, hence Mothercare.com putting price at the top of the product page.

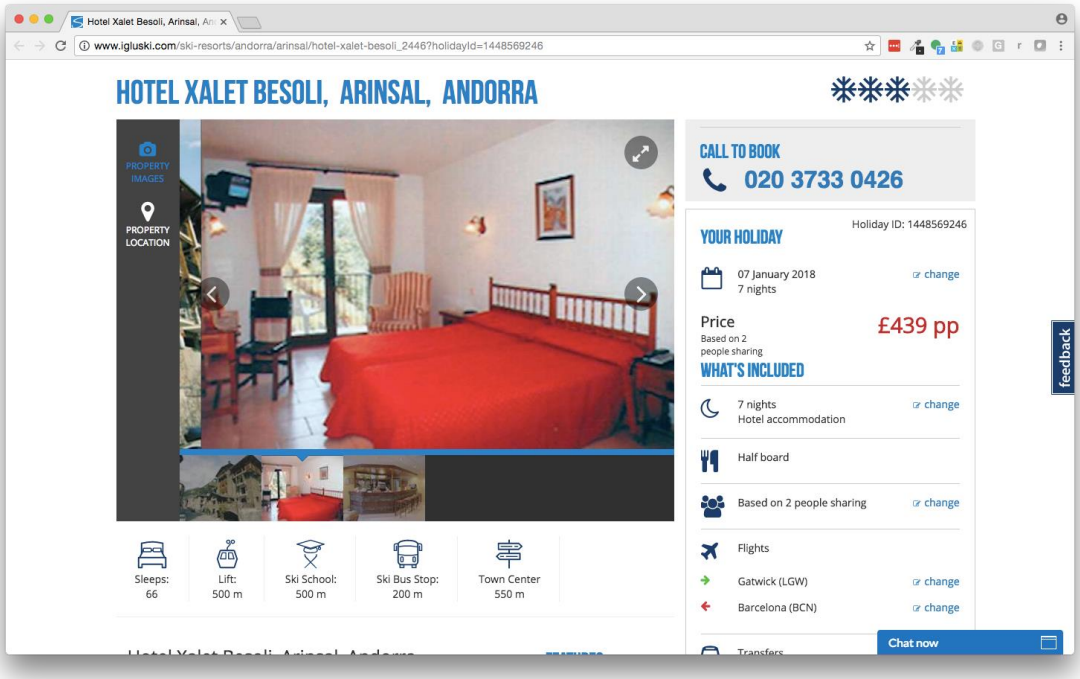
Figure 45: Mothercare.com mobile site




When it comes to selling services or more bespoke products, the number of options needed to specify a purchase might require its own user journey. Still: the affirmation of clicking through from a product page to begin this journey should help guide customers along a path to purchase, and provide analytics to help optimise conversion.

For complex specification products like holidays, dynamic variables can be used to update key features like price as customers move along the purchase journey.

Figure 46: Changing variables on the Iglu Ski site seamlessly updates the price (see right hand column)




## 6.3.2. Calls to action

The rules for calls to action on product pages are the same for the design of any communication: **make it clear**. This means having a minimum 'hit area' of 44 x 44px with good padding (the free space around the button) so they work for touch devices, such as tablets, smartphones and laptops with touchscreens.

Customers investing their time and purpose in navigating to the point where they're ready to make a decision need to know exactly what they need to do next if that decision is "yes". A hidden or unclear call to action button on a product page is the equivalent of a door-to-door sales person looking shocked and surprised when a householder says they'll buy whatever is on offer.

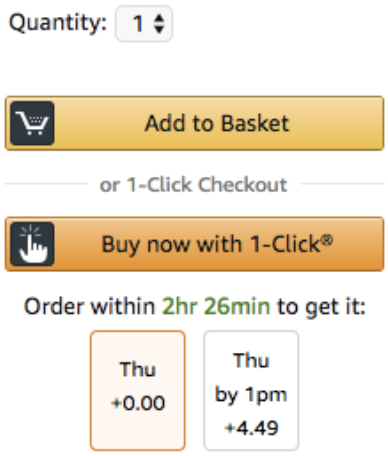
Testing call to action buttons is always the best way to optimise performance. But for readers who are at the design phase, or lack the time and resource to carry out extensive testing, the key factors to think about are as follows:

**Design for prominence.** This doesn't have to mean the call to action is garish or arresting; just that it stands out from the background, and is clear and obvious. Ensuring design consistency between product pages will help customers learn the ropes of your ecommerce site.

**Colour.** This is subtler than design, and various general rules of the 'correct' colour of a call to action button including hearsay research that say red converts better because "we like to do things we're forbidden from doing". The only true answer, however, is: *it depends*. Like design factors, the colour should stand out from the background of the page it's on. Consider choosing two key colours, one for primary actions like 'Add to Basket' and another for secondary actions, to use throughout your site. Avoid colours that could be mistaken for inactive state indicators, such as grey.

Don't forget that colours have different meanings in different cultures. What in one culture represents sacredness, in another is jealousy (yellow, as it happens). In Western culture, red normally indicates error/delete/don't do this, which you could use either way.

Figure 47: Amazon's primary call to action is 'Add to Basket', with the 1-Click button a darker, secondary colour throughout



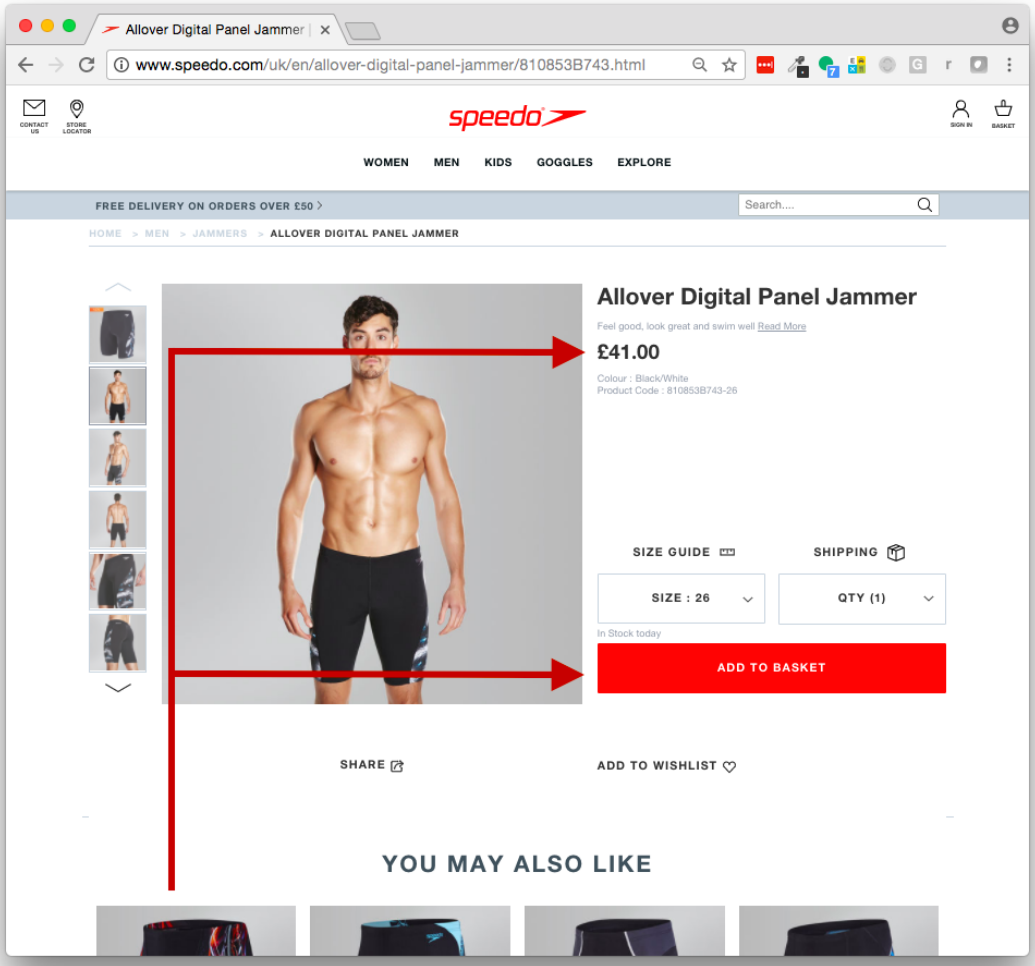

**Wording.** WC3, the standard bearers for quality in web design and accessibility, advise that when calling the user to action, use brief but meaningful link text that:

- Provides some information when read out of context
- Explains what the link offers
- Doesn't talk about mechanics
- Is not a verb phrase

Your 'Add to Basket' button should leave users in no doubt about what will happen next when they click the link.

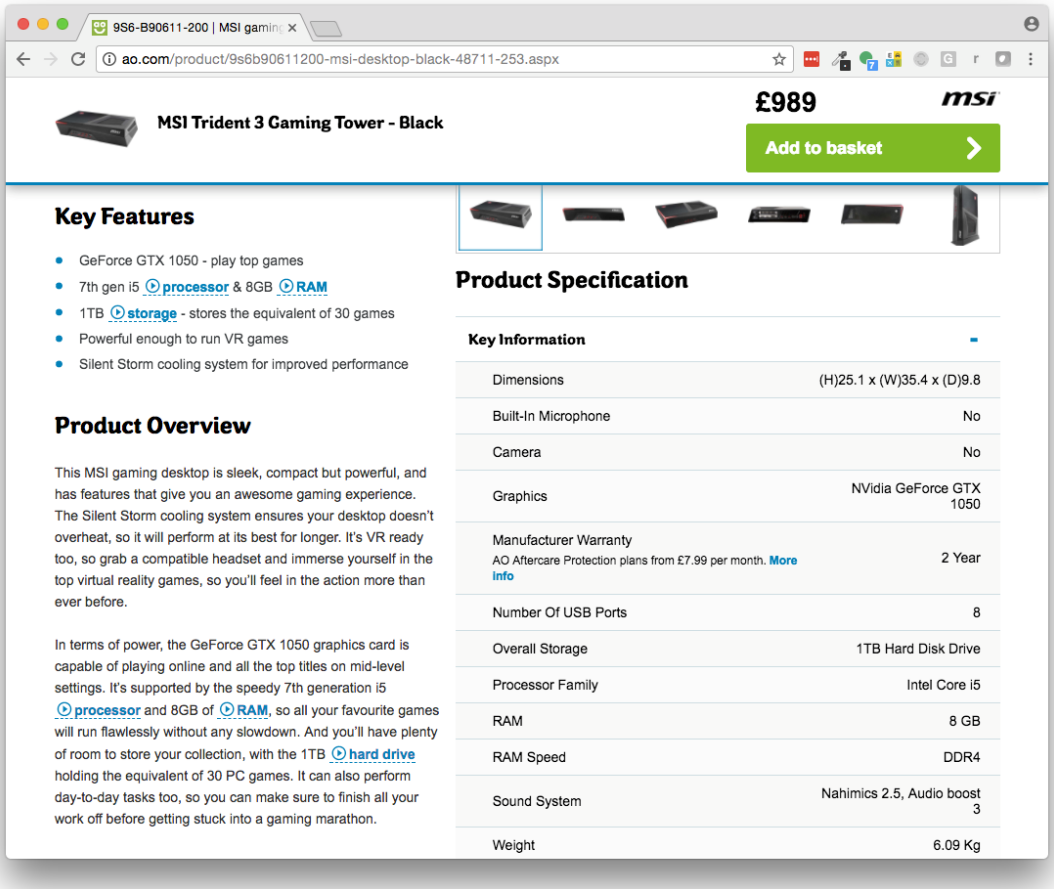
**Size and placement.** Following the logic of the "F shape" way in which users scan pages for meaning, an 'Add to Basket' button should be placed where a user will see it as they scan the product page. Place the button just below the price, or to the right of the product details, to keep it within the F shape (*Figure 48*).

Figure 48: Speedo's product pages appear to be designed with the F shape in mind




If a product page is lengthy, such as a holiday specification page, then make sure the call to action button follows the user down the page, ready for when they've made up their mind.

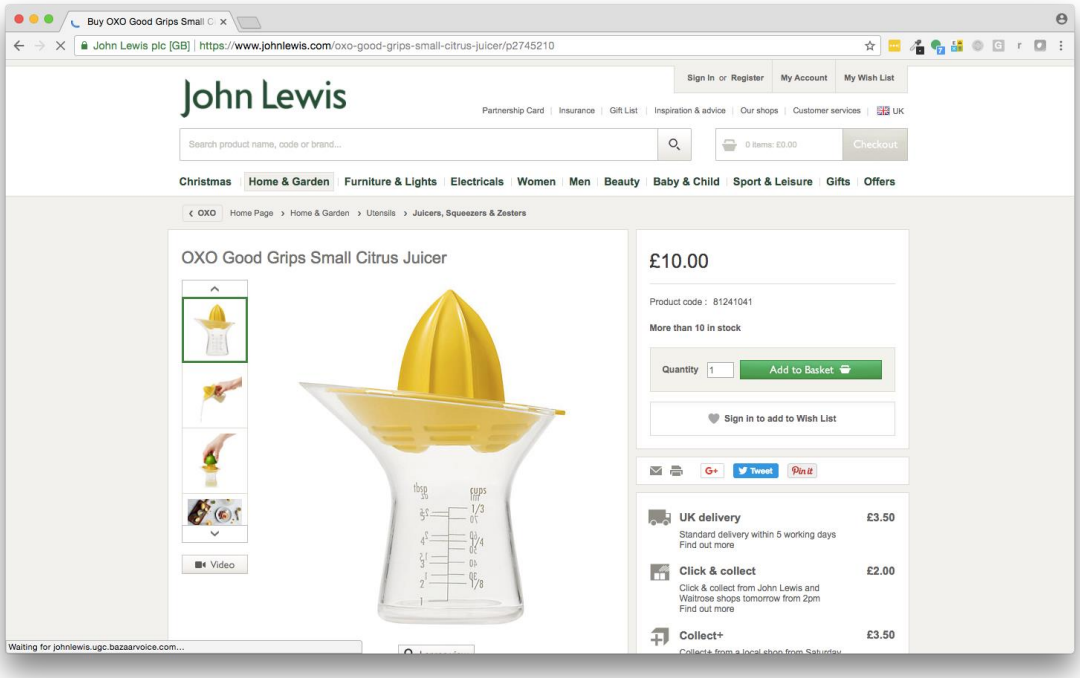
Figure 49: AO.com ensures the product price and ‘Add to Basket’ button remain available even when users scroll down through product details




## 6.3.3. Don’t forget to give the product room to breathe

In web design terms, less is often more, and white space can give product information crucial room to breathe. Simplicity is not simple to achieve, but spaces means more opportunity for calls to action to stand out.

Figure 50: John Lewis gives Oxo's design-led kitchen products room to breathe on the product page. It's a lemon juicer after all... how much do you want to know?

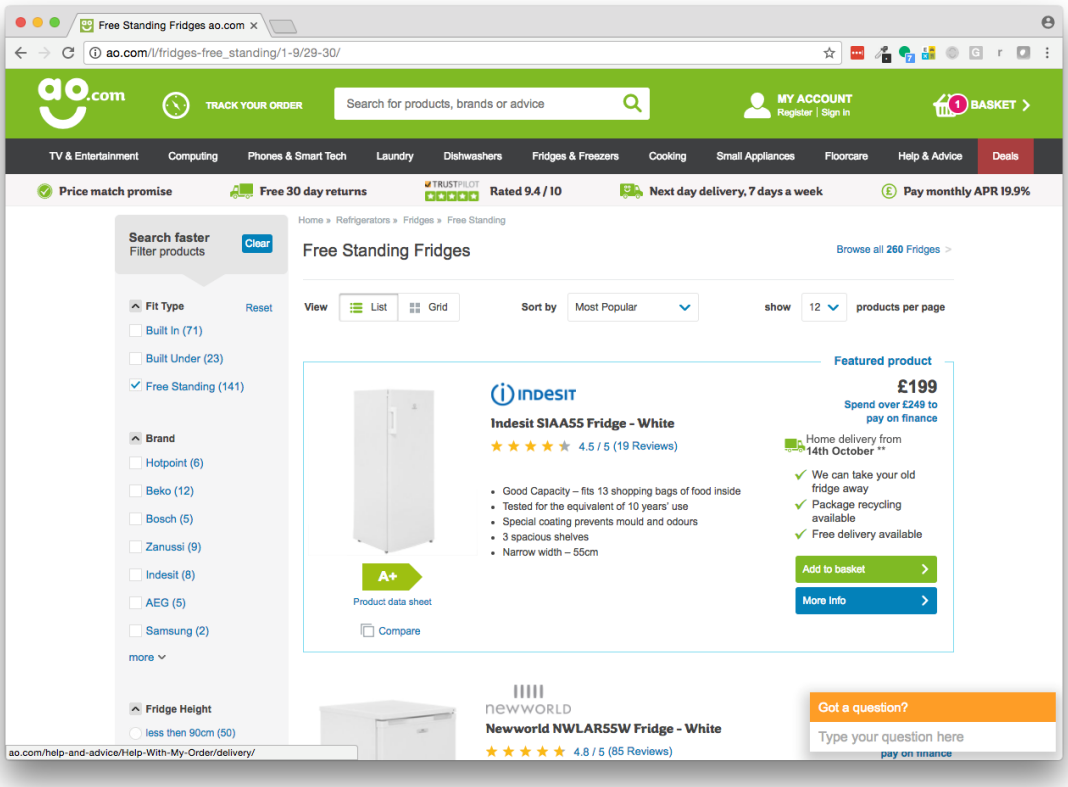



## 6.3.4. Copywriting

With thousands of products to contend with, it might seem simpler to defer to manufacturers or commercial teams to put together product copy, but this could be missing a trick.

Product page copy still has a big role to play in SEO, not least in guiding users towards clicking on your organic listings (whether in blended search or shopping-specific) over others. But SEO-friendly text is useless to real people, and despite the fascination with imagery and the scarcity of time in modern ecommerce, copy still counts when it comes to conversions. In particular, the consistency in tone of voice in the way products are described can make the product feel like it is part of the family.

Figure 51: AO.com's 'number of bags of shopping' fridge comparison is a unique, useful and on-brand feature




Above all: keep product page copy scannable; use of **bold highlights** and bullet points is good.

## 6.3.5. Images and videos

Product imagery is important: people need to be able to see what they are buying both to help with conversion and reduce returns. The style and prominence of the images will depend on the brand and product type. For example, John Lewis uses big high quality images as they are also selling a lifestyle, not just a lemon juicer.

Not all suppliers will send suitable images, and sometimes use totally inappropriate images.

Figure 52: Wiggle has chosen to crop this image from the original

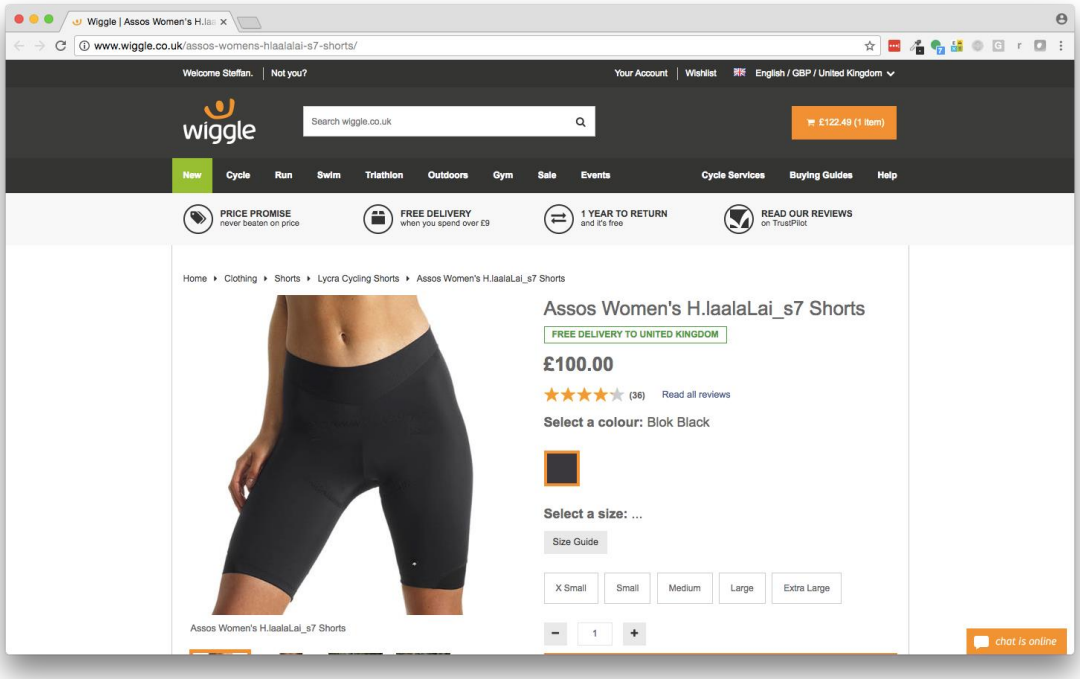
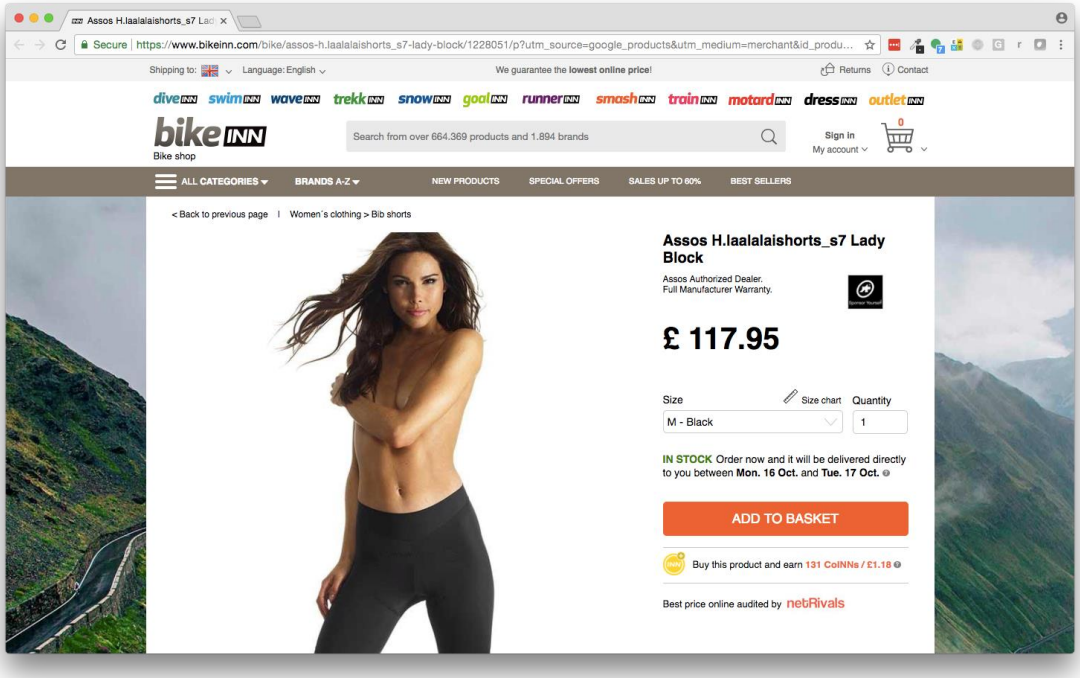



Figure 53: The original supplier image is used elsewhere




It is not unusual for ecommerce retailers to reshoot products to suit their own guidelines. DAM providers often provide photography services so retailers can specify the aesthetic. Tesco Direct operates its own photography and video studio, such is the volume of product samples it wants to be able to style to its own requirements.

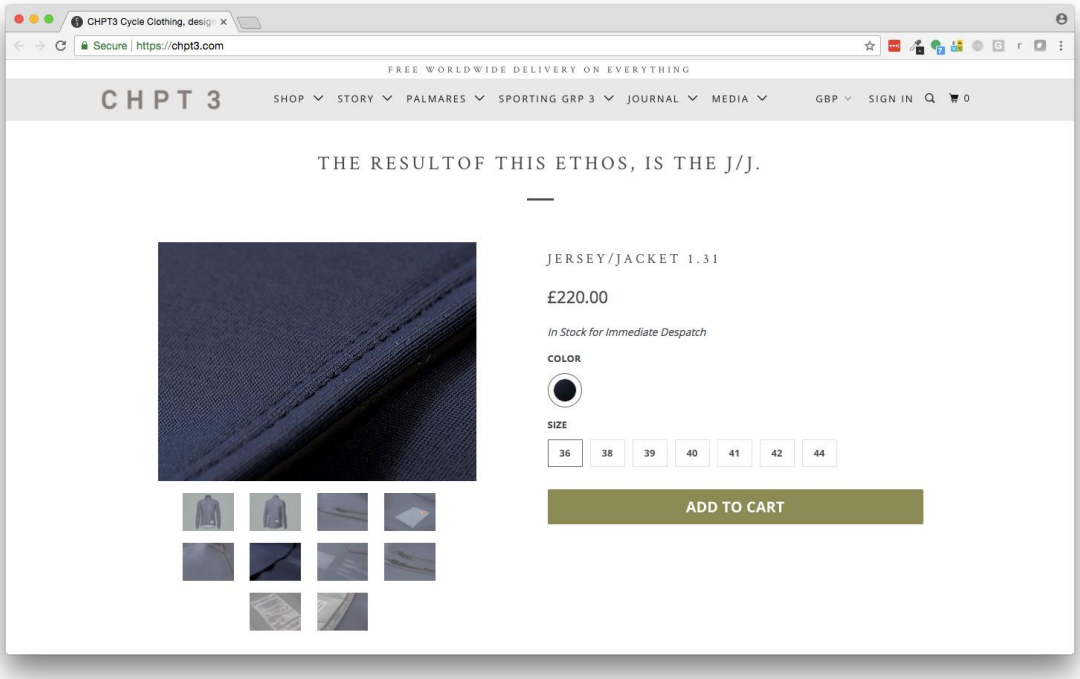
## Unique content is integral to [cycling apparel retailer] CHPT3's strategy

"We launched CHPT3.com in July this year, focusing on premium cycling apparel. The site utilises high-quality photography and images, worthy of £220 of cycling jersey!

"Ex-pro cyclist David Millar is an award-winning author with a huge social following and is extremely well connected both inside and outside the cycling world. We have created a very highly curated journal section blog, very deep and extensive static content pages around David and the story of CHPT3 so far, plus we have engaged with a collection of ambassadors (Sporting Group 3) to further help position the brand and extend the reach of the unique content."

**Steve Mills, Director, Green Snow Online Fulfilment**

Figure 54: CHPT3 product page imagery allows macro inspection of garment details




## Further reading

**Eight different ways of using product videos in ecommerce**
https://econsultancy.com/blog/61857-eight-different-ways-of-using-product-videos-in-ecommerce

**Do bigger images mean improved conversion rates? Three case studies**
https://econsultancy.com/blog/62391-do-bigger-images-mean-improved-conversion-rates-three-case-studies

# 6.4. Product recommendations

Standard ecommerce recommendations are driven by 'people who bought X also bought Y' variables. But the next level of product recommendations is within the grasp of ecommerce managers: advanced product cross-promotion that serves suggestions individually to customers using algorithms that look at traffic source, on-site behaviour, and purchase history as well as the traditional linked product relationships.

Dynamic content is fast becoming an established practice within email, and it represents a big opportunity for ecommerce too. Simple steps beyond email personalisation and re-targeting could include offering concierge-style prompts on different pages like "Based on your purchase history, we think you're probably going to like X more", or "Christmas is coming up – are you still buying presents for 5-year-olds?".

*Section 6.5* discusses personalisation on landing pages, while *section 6.7.1* lists explicit preferences to allow personalisation among the features of customer profiles.

But the power of personalisation is currently being woefully under-exploited by ecommerce.

**Further reading**

**11 useful examples of copywriting for product recommendations**
https://econsultancy.com/blog/62678-11-useful-examples-of-copywriting-for-product-recommendations

## 6.5. Landing pages

Econsultancy's SEO Best Practice Guide on Landing Page Optimisation[18] contains a comprehensive guide to how to optimise landing pages. The following guidelines will help ecommerce managers who are responsible for landing pages that are the destination for customer acquisition and marketing campaigns (as opposed to product pages).

### Understand what you're using the landing page for

If the landing page is the result of a marketing campaign, then get to grips with the target audience for the campaign by asking yourself the following questions:

- Who is it for?
- What sort of customer is likely to arrive there, and from what channel?
- What did the call to action they clicked on say?
- Do they have specific expectations for what they will find?
- Do they already know the brand or are they likely to be newcomers?

The answers to these questions may have a profound effect on the hierarchy of information on the landing page, and could lead to a radically different layout compared to product pages.

Personalisation could be a powerful tool here: updating marketing messages based on variables like whether the customer is a returning visitor could enable you to have a more relevant conversation with them and increase chance of conversion.

Some of the same rules apply: upon a quick scan the page must reveal its meaning and reassure the customer they've made the right choice to come there.

### Set realistic goals

Ecommerce managers spend a long time thinking about top category pages, but often landing pages are the most popular entry point for new customers. Whether these are product pages or campaign landing pages, understanding the buying journey is crucial for working out what a meaningful goal might be, around which you may build your landing page.

[18] *https://econsultancy.com/reports/seo-best-practice-landing-page-optimization*

A customer arriving on a landing page as a result of a marketing campaign may be nearing the end of their engagement journey for that particular session. Engaging with the campaign may already have taken them a long way down the path, but actual conversion may not be a realistic option, compared to someone who's searched for a particular product and arrived on your site with a strong intention to purchase.

If the latter is clicking directly to a 'deep linked' product page, conversion may still require a different amount of reassurance and persuasion that the retailer they've arrived at for the first time is a trusted choice.

While your overall objective might be conversion, is it realistic to expect a customer to complete a sale within that journey? The success or otherwise of landing pages could also be measured on whether customers click through to product pages, engage with images or videos, or spend a certain amount of time on the site.

Capturing enough information to bring the customer back to that point in the future may be the best option. This can be achieved with cookies, registration or "send me this information"-type options. In addition, landing pages should ideally be navigable within the site so customers arriving from a search engine can choose to go back through the different steps in their journey without relying on the back button.

For complex or high value purchases in particular, users experimenting with different configurations can be a key part of their path to purchase – and even cursory engagement with a landing page might be a hard-earned interim success outcome.

Aside from your ability to capture and follow up with potential customers who arrive on your landing pages, part of the landing page's job is simply to be memorable so the returning customer has a reason to remember to come back again.

## 6.6. Checkout

The checkout process needs to follow a clear route, offering next steps through to completion. Although the issue of isolating the checkout is explored in *section 7.2.2*, from a usability perspective, people go backwards as well as forwards all the time when they browse the web, and it's important to avoid forcing too linear a path.

Particularly important is the ability for customers to go back (and for 'back' buttons on the site to have the same effect as 'hard back' using browser buttons) and not have to re-key information they've already entered.

Ecommerce transactions generally involve some sort of login or registration process. Although analytics systems will already have assigned a customer with a unique identifier that can track all their on-site behaviour (even across multiple sessions and devices), encouraging customers to login means purchases can be attributed to a unique customer record.

Fortunately, most customers have come to expect this as a requirement of shopping online and the main benefit to customers is speed – using customer data captured last time such as delivery address and payment details. Even entering an email address in guest checkout mode is beneficial to customers who want to receive a record of their transaction.

This need for reassurance drills down to the heart of the dilemma in checkout design: making the process as seamless as possible so that it is easy and affords fewer opportunities to back out, vs. ensuring customers are reassured that their purchase has gone through. In other words: the transaction can be too easy.

The longer the relationship a customer has with a vendor, the easier it will be to make the checkout experience faster, to the level of Amazon's 1-Click purchase button, as explored in *section 6.3.2*, which simply posts the item to the user's preferred address and charges their default card.

### 6.6.1. Checkout registration

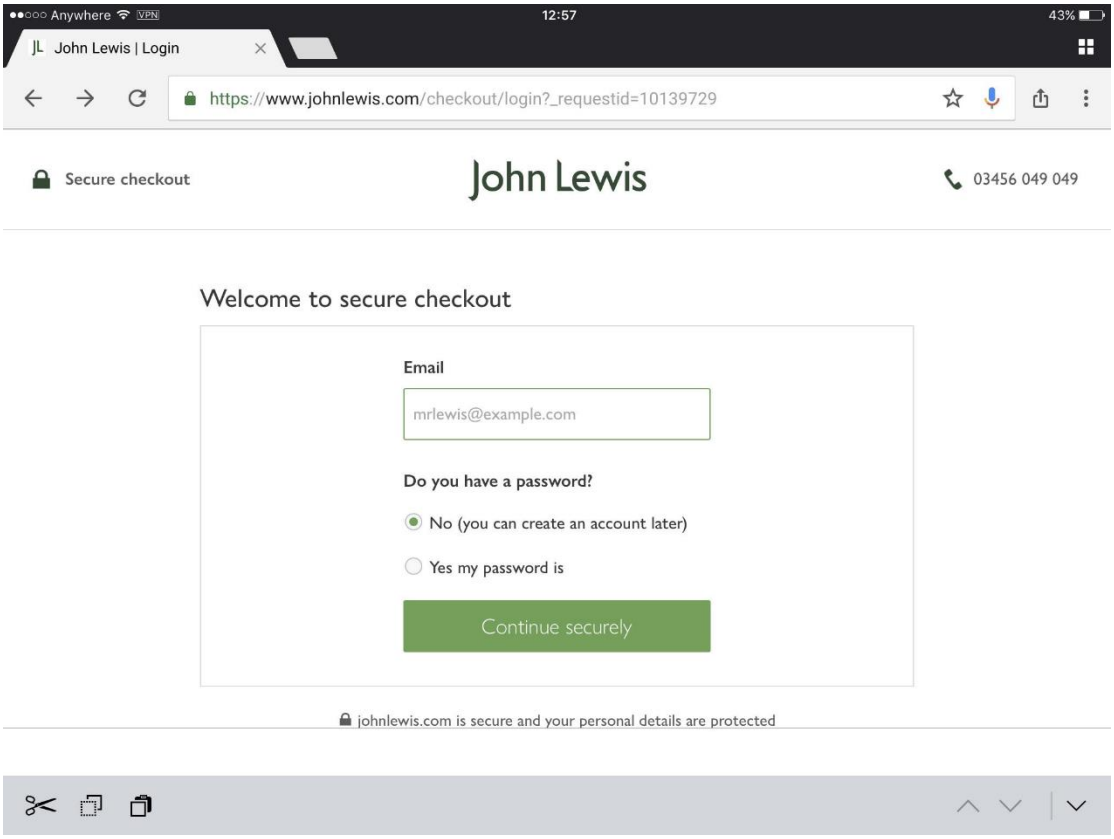
Marketers and user experience designers are often at odds about what details are required for checkout. This has led to the development of a two-path approach: the so-called 'guest checkout' vs. full registration.

A **guest checkout** option affords the user the chance to enter the minimum viable data needed to complete a purchase (name, email address, postal address, payment details). This does raise the question of "why would anyone ever choose 'long winded' approach?!", especially when the marketing requirements can still be met by matching data in order to link guest orders to customer profiles.

The role of **full registration** might be to allow new customers who are planning on returning frequently to store their details, but how large a segment of your customer base is this in practice? Does asking a question like "are you a new or returning customer?" truly help users navigate the checkout process, or is it more reflective of the marketing team's way of thinking about customers? I may be a previous customer, but have no idea whether or not I registered, or I may be a customer who has never bought anything from you online. Of course, the ultimate 'guest checkout' option is Facebook Login, which we explored in *section 3.2.6*.

John Lewis addresses the problem of registration by letting people proceed through guest checkout even if an account is registered to the email address they enter, which is hugely beneficial to users, especially on mobile, who may not have their passwords stored or to hand.

Figure 55: John Lewis avoids the question of “are you a new or returning customer?” by asking customers whether they think they have a password




The best approach is to see checkout and registration as a progressive function, i.e., where every visitor starts on the same path, but has the option to stop entering more details as soon as the bare minimum has been provided.

For example, payment gateway Stripe has extensively engineered and tested the payment details entry screen, and now offers full checkout functionality on top, which can be integrated with a few lines of code (*Figure 56*).

Figure 56: Stripe has stripped down payment details entry to the bare minimum…

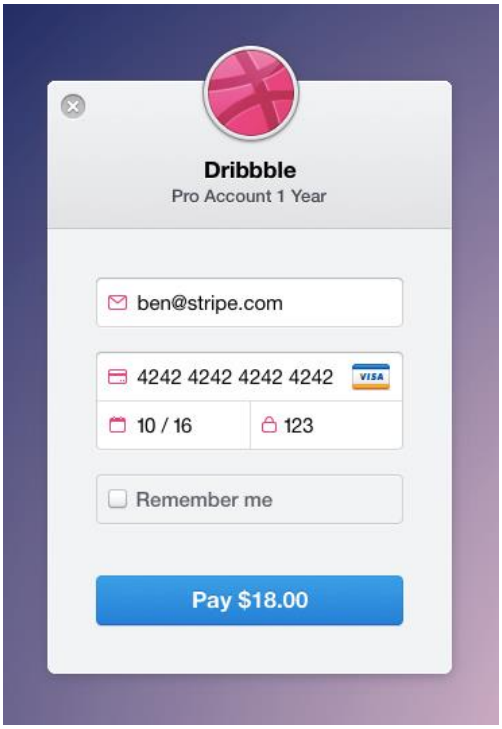
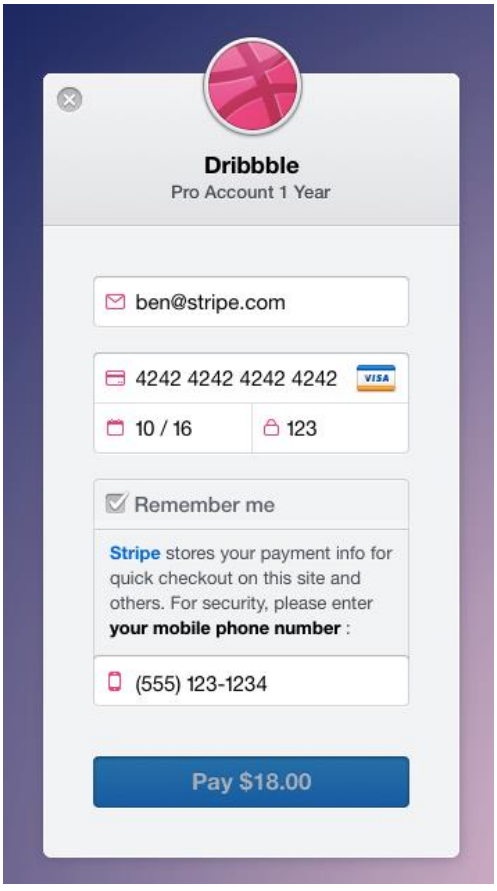



Figure 57: …while letting users toggle between so-called ‘guest’ checkout and full registration with the tap of a checkbox



A progressive approach to checkout registration has the benefit of offering users additional registration benefits once they know they've already carried out the majority of the work required.

The following example (*Figure 58*) shows what is probably the most elegant and stripped-down combination of all four stages of the checkout process: delivery, payment, review and completion – using a cascading or 'accordion' design.

Figure 58: Holland & Barrett has email address validation in the first stage...

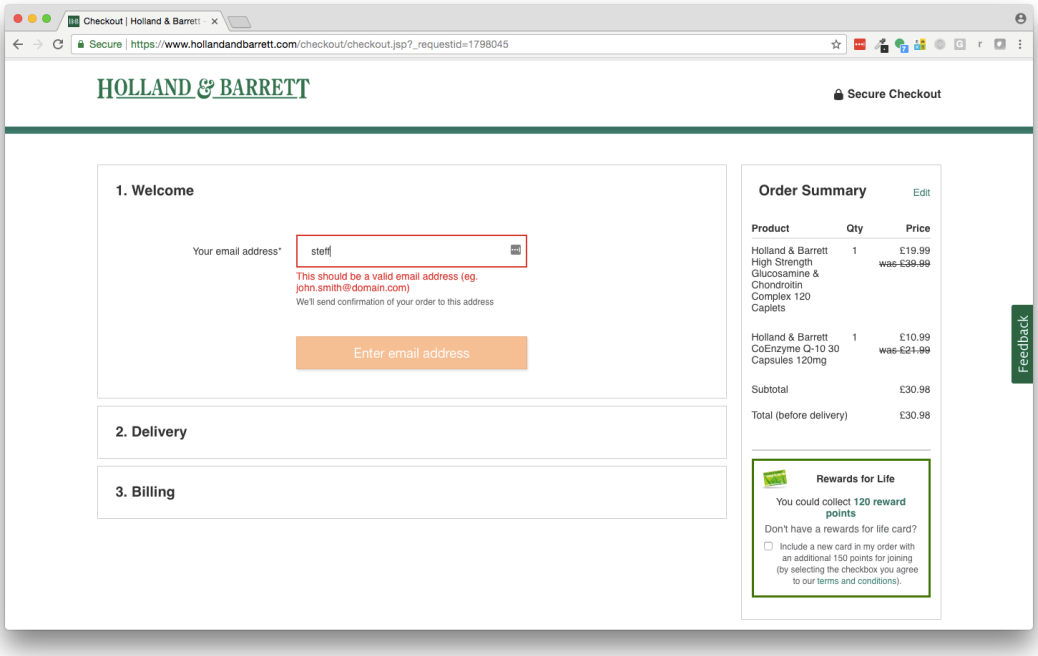



Figure 59: ... browser autofill-friendly form fields (also, a basket summary that updates on the fly as delivery options are chosen)...

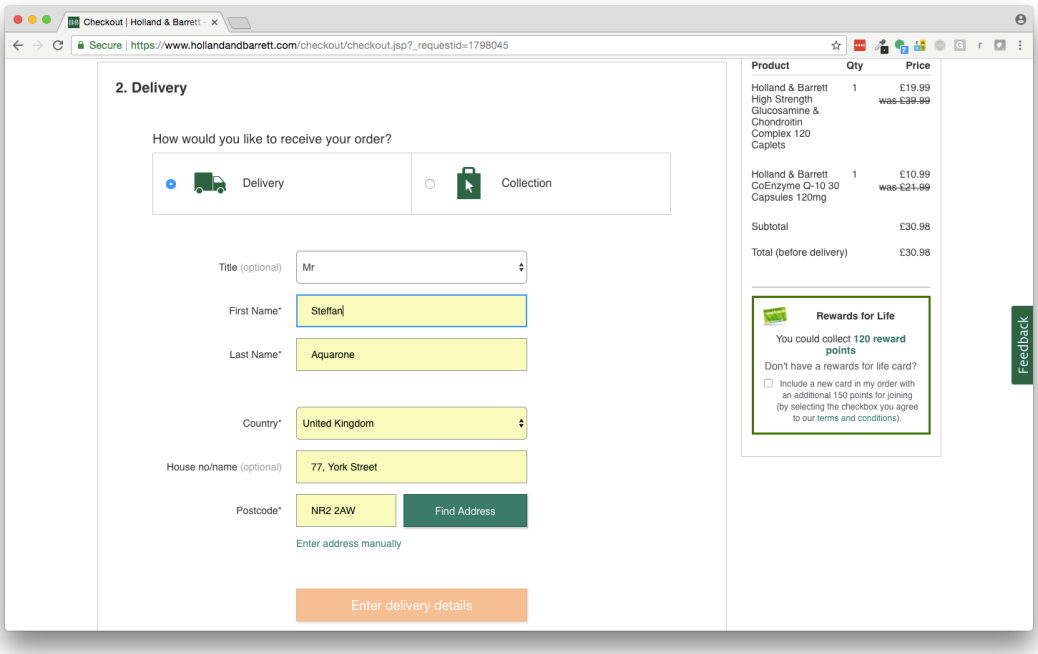
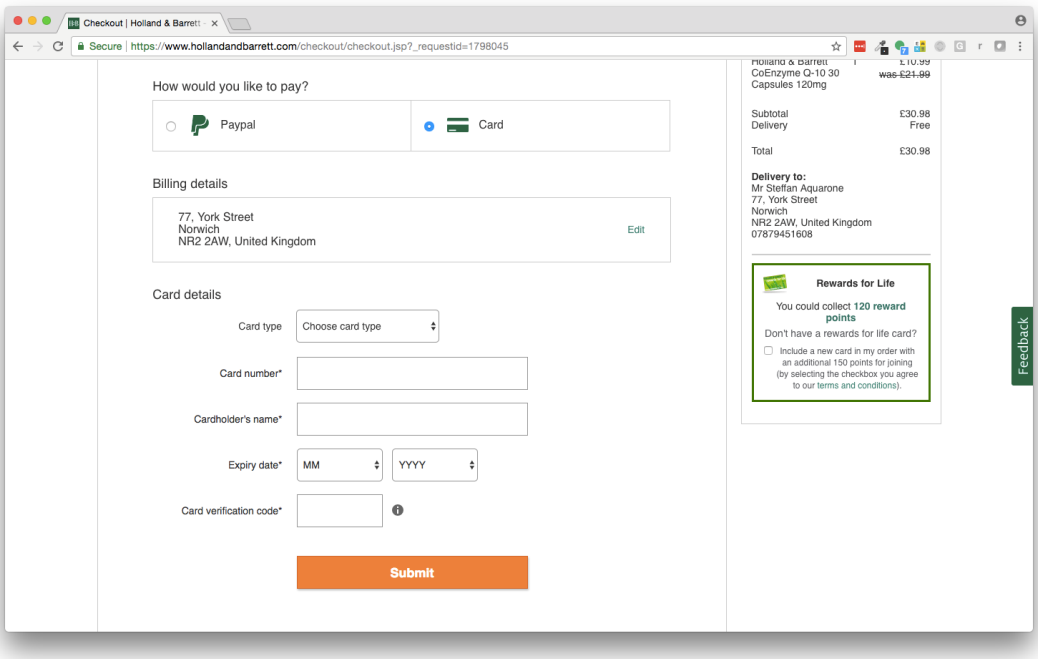


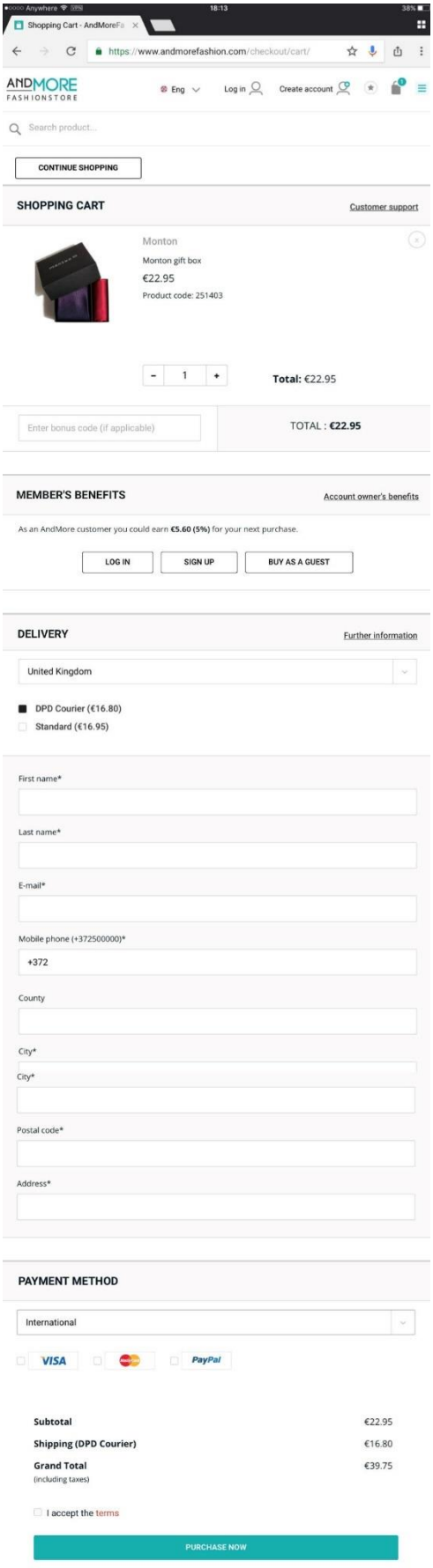
Figure 60: ...and minimal payment details.




But as the Stripe example showed, there is no reason why these need to be separate stages. The following example (*Figure 61*) also illustrates how retailers can feature all fields on a single page (thanks to user Rasmus for pointing this one out in response to a previous Econsultancy blog post[19]).

[19] *https://econsultancy.com/blog/65588-nine-single-page-ecommerce-checkouts-of-varying-quality*

Figure 61: AndMoreFashion's single page checkout



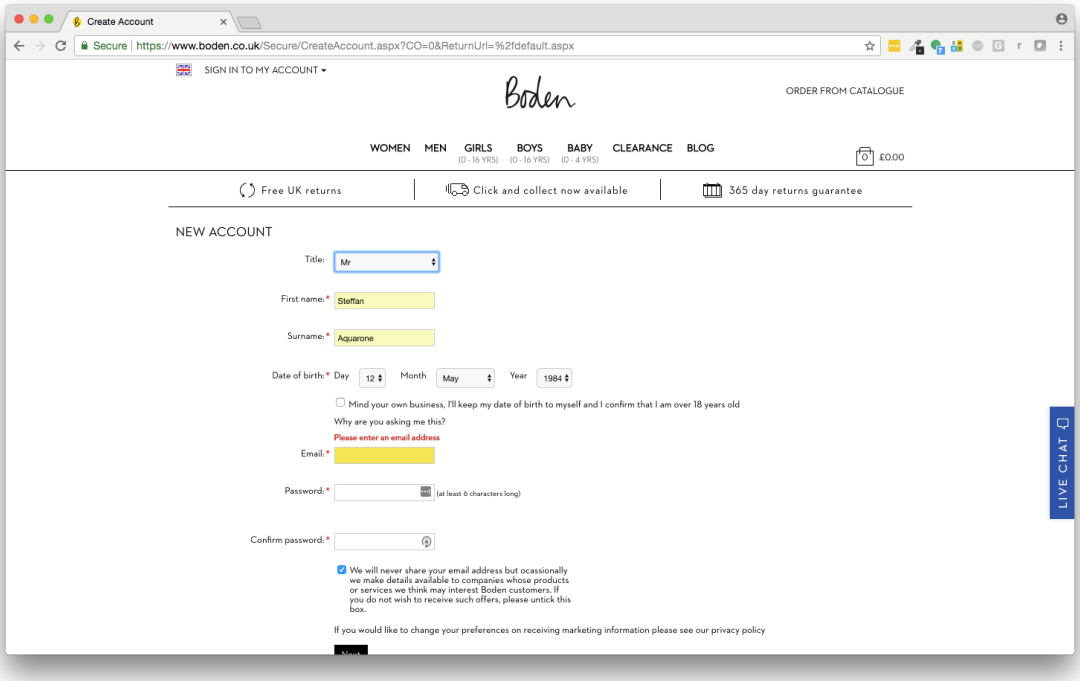
## 6.6.2. Checkout optimisations

Whether you need to achieve the entire functionality of the checkout really depends on your product. What's more, checkout optimisation isn't just down to reductive design. It can also benefit hugely from a well thought out approach to data entry. You may want to try the following checkout optimisations:

1. **Automatically selecting the user's country** and filling in their city and state when they enter a postal code helps make address entry even easier. Yet thousands of ecommerce sites still require users to scroll through a list of countries in alphabetical order.
2. Real time postal and email **address verification**, too, can help avoid delivery, payment or email confirmation errors. Watch out for separate fields that are unnecessary, for example, house number/house name. Separate fields suggest the system has been designed for the benefit of the database owner, not the user, whereas a simple bit of validation could determine in which data field to store the details that have been entered.
3. **Taking a higher risk on chargebacks** in order to avoid 3D secure verification (more on this in *section 3.2.10*) may make commercial sense depending on the impact on sales conversions.
4. Ensure names of **form fields are standardised** and aligned with browsers' autofill options. Each form field can be given a name in the code, and applying naming conventions to form fields means users who store frequently entered details in their browser can enter them seamlessly at the touch of a button, but only if the fields line up.
5. Carrying out performance optimisations to **increase speed** – see Jakob Nielsen's explanation of the speed factor in *section 6.2.6*. Delays in loading pages or confirmation may be enough to damage customer confidence in the whole process.
6. **Avoid information loss** – for example if customers are required to move through multiple stages, the data they've entered should be stored temporarily so they don't need to re-key if they navigate between stages – or away from the checkout before coming back again.
7. **Check for error handling** – for example, if customers go back, pop-ups that ask for confirmation of form resubmission may confuse people or break on mobile. If a field on a page needs correcting, the user interface should clearly highlight the field in question rather than just triggering a popup.
8. **Use web form standards** to select the correct field type for the question being asked – see the latest WC3 guidance[20] for more.
9. Only make fields mandatory when they are **absolutely essential**.

[20] https://www.w3.org/TR/html5/forms.html#writing-a-form's-user-interface

Figure 62: Boden allows customers to skip the date of birth field, and provides a link to explain why it is asking




More techniques for optimising the checkout process – and dealing with checkout abandonment – are dealt with in *section 7.2.2*.

## 6.6.3. Providing reassurance

Even though there should theoretically be nothing a site can do visually to reassure users that it is secure (anything visual can of course be reproduced by nefarious actors) a lot of people will judge if they think your site is secure based purely on aesthetics.

People need reassurance – especially when handing over their card details – and fortunately, web browsers have the potential to refer to third party issued certificates that demonstrate security compliance.

More diligent consumers have learned to trust sites starting with https (https stands for "http secure", meaning the data which is sent between the user's browser and your website is encrypted) and recognise SSL (Secure Sockets Layer) certificates in their browsers.

SSL certificates conform to a global cryptography standard called X.509 and are issued by recognised providers like Symantec, Comodo and GoDaddy. When a web user visits a site with a valid SSL certificate, their web browser displays certain signals such as a padlock at the end of the address bar, or a green highlighted area.

Figure 63: Examples of how valid SSL certificates are displayed by different web browsers


Mobile browsers tend to deal with SSL certificates by exception (for example, if a user visits a site that claims to have SSL but has an invalid certificate).

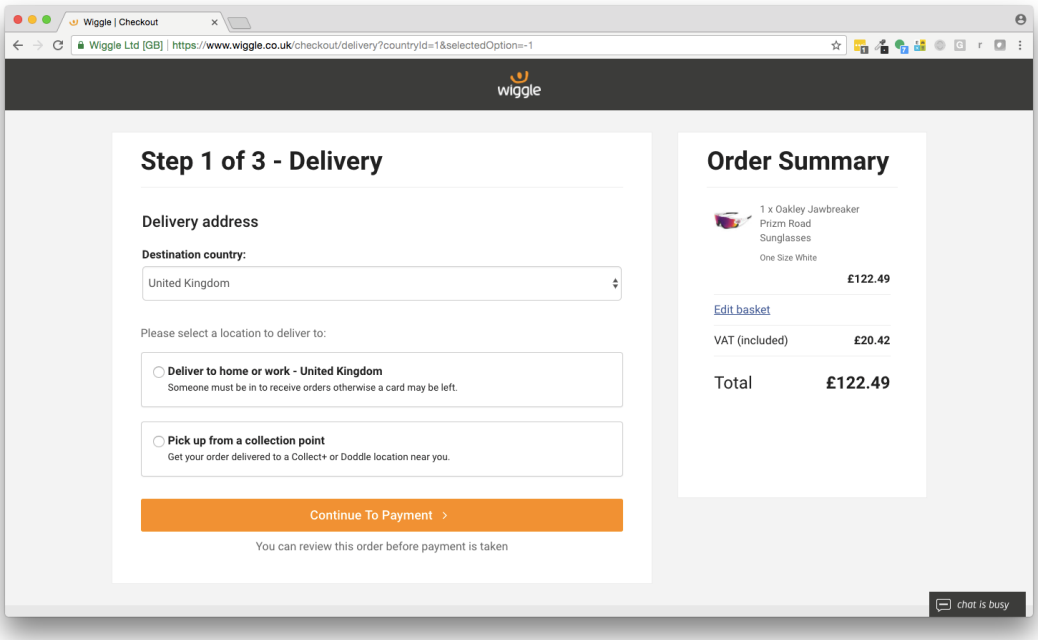
**Post-'Add to Basket'**

The post-'Add to Basket' action needs to be carefully considered depending on sector: a product or service with complex transaction process will be more likely to need to take users into a flow such as availability searching and specification.

In these events, progress indicators are a useful way of showing customers how close they are to completion, as we explore further in *section 7.2.2*. Likewise, having a persistent basket summary at this point can help remind users of the contents of their baskets and the total cost of the order so they don't have to leave the checkout for this information.

Pop up basket confirmation can be a helpful feature for customers who are shopping for a few items and want to check what they've picked up without navigating away from the page they're browsing.

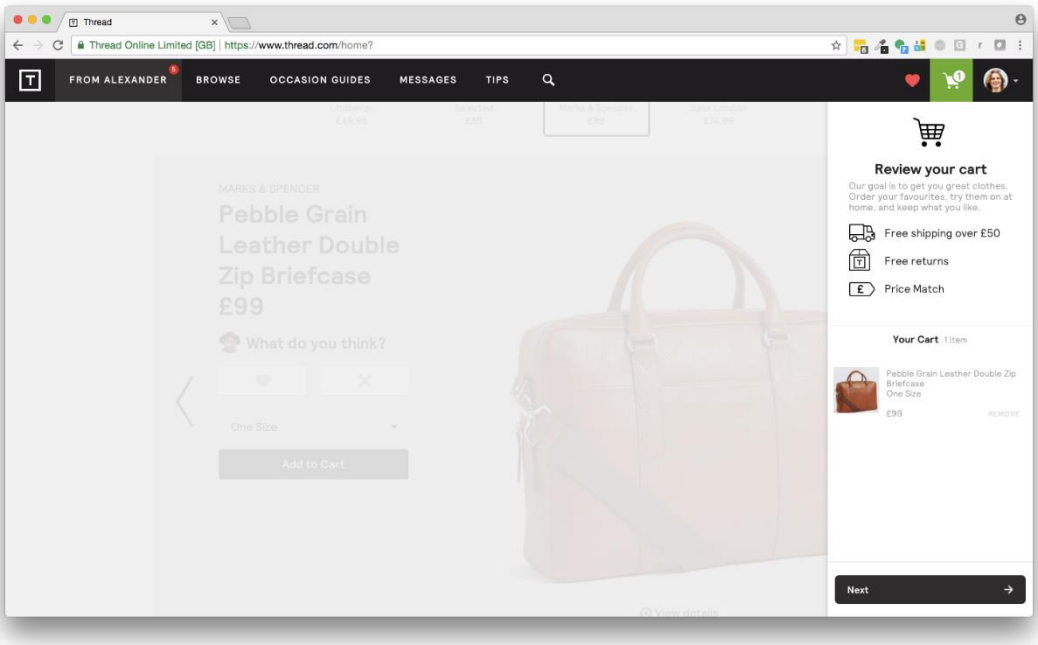
Figure 64: Wiggle.co.uk's persistent basket summary throughout the checkout process




But for simpler ecommerce situations, leaving people on the product page (or blog or other content) it is established best practice.

A temporary banner across the top of the page, confirming that the item has been added to the basket, can be a preferred option to pop-up notifications. Augmenting a simple item count next to the basket option is another.

Figure 65: Thread.com offers an item count (top right, beside trolley icon) as well as temporary basket summary on desktop browsers, which disappears if you start scrolling




What was once acceptable, even four years ago, now seems clunky. Customers have grown used to filling in forms with just a few keystrokes. As soon as one ecommerce retailer or payment gateway finds a way of removing the need for a piece of data to complete a purchase, customers get frustrated when they still need to provide it elsewhere.

**Further reading**

**Which ecommerce security logos do users trust? Do they matter?**
https://econsultancy.com/blog/64459-which-ecommerce-security-logos-do-users-trust-do-they-matter

**21 first class examples of effective web form design**
https://econsultancy.com/blog/64669-21-first-class-examples-of-effective-web-form-design

**A usability benchmark of 50 e-commerce sites ranked by checkout usability performance**
https://baymard.com/checkout-usability/benchmark/top-100

## 6.7. Customer profile

Tempting as it is to focus your design attention on homepages, product pages and checkout processes, the place that many regular, high value customers will end up spending time is on their account page: changing settings, searching past orders or re-ordering at the touch of a button.

There are great commercial opportunities in helping customers buy more easily and more often, and they're being overlooked by many ecommerce retailers.

### 6.7.1. Design considerations

To design an effective 'My Account' offering that is genuinely useful to customers, ecommerce managers need to think carefully about business goals and customer needs. This is a tricky user-

experience design balance at the best of times. When it comes to account features, what is most important to the user will vary greatly depending on the type of products and services being offered.

Mapping user stories can be a good way of working out what the priority tasks are for users.

User stories (sometimes called user journeys) are text descriptions of the journeys or stories the personas should be able to carry out with the product. A user story is a simple way of conveying the purpose of a feature, without becoming entangled in the complexity of how it will work in practice on the site.

Good user stories are simple and written from the point of view of a clear customer persona, communicating what the user can do with the product.

When compiling stories, they typically follow a pattern like:

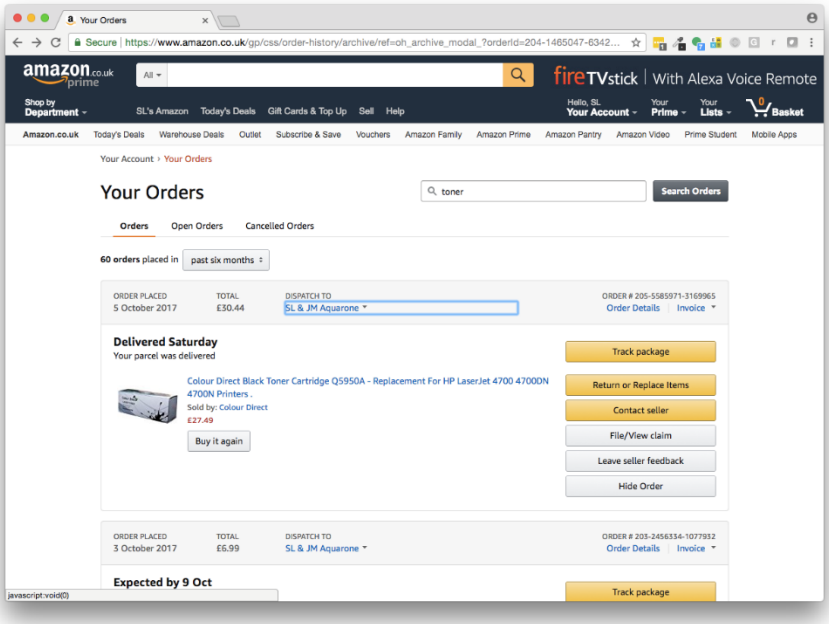
As a {type of customer}, I want {outcome} so that {reason}.

To learn more about user story mapping, read Econsultancy's User Experience and Interaction Design for Mobile and Web.[21]

Customer goals might include:

- See order status (see below)
- Shop again quickly
- Set up a regular item purchase
- Change stored payment card and address details
- Personalisation configurations that help with inspiration or discovery.

Figure 66: As well as "buy it again" options for all past orders, Amazon's order history feature has its own search engine




[21] https://econsultancy.com/reports/user-experience-and-interaction-design-for-mobile-and-web

Figure 67: The ‘My Account’ menu itself even has a hover state menu of frequently purchased items

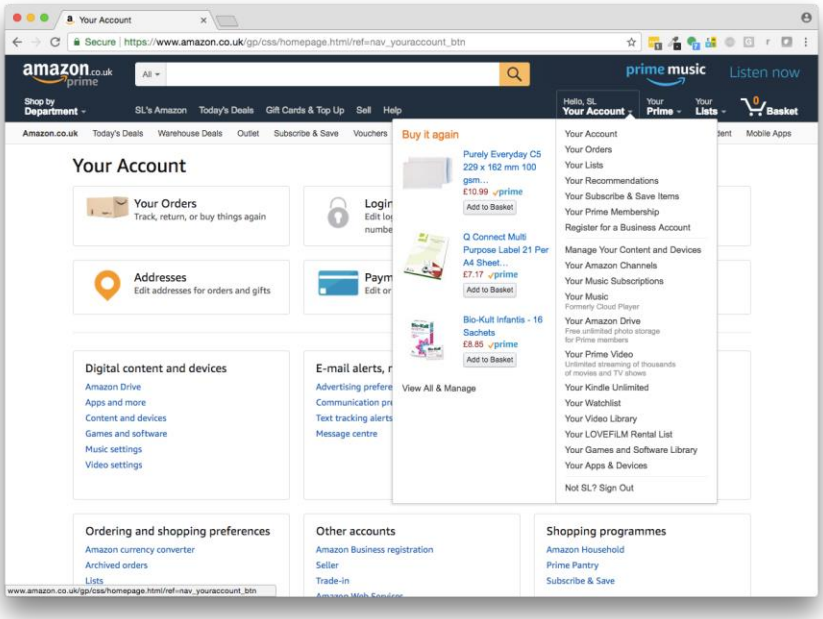



Figure 68: Milk&more makes it easy to manage regular item delivery quantities

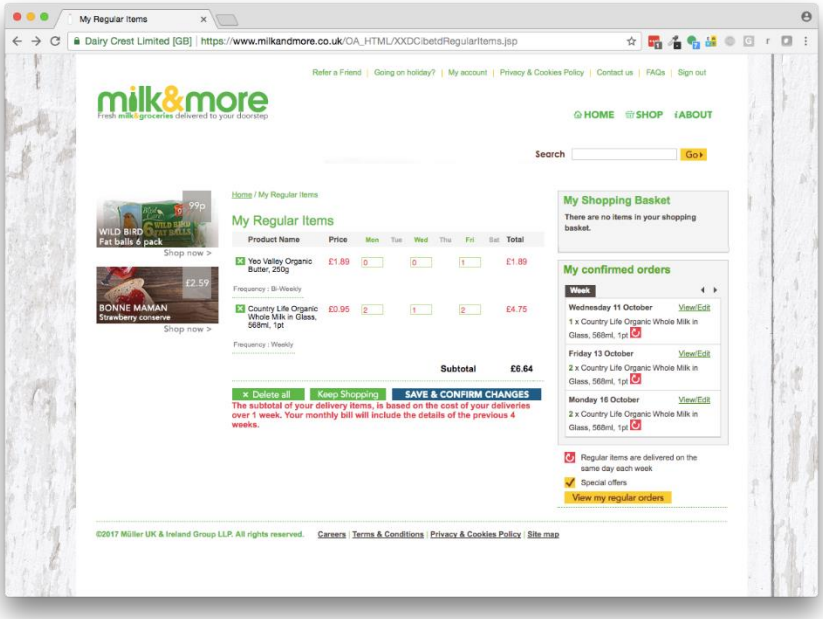


Figure 69: Thread.com allows users to specify their typical price point for each item of clothing, as well as upload photos and clothing sizes

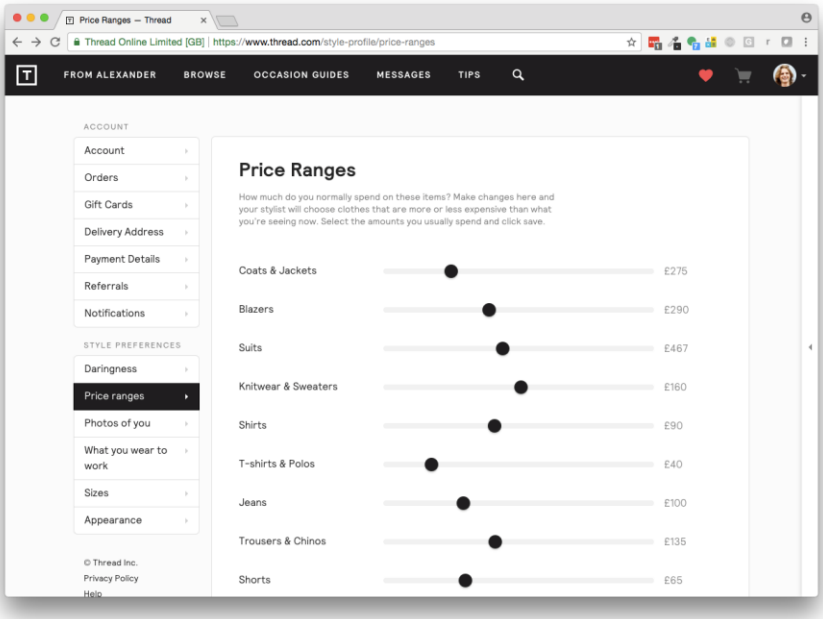
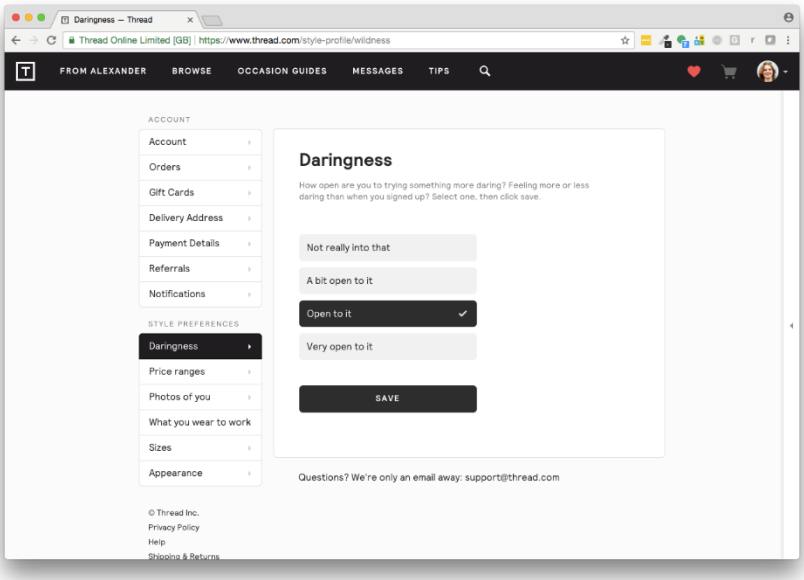



Figure 70: Thread.com asks customers to specify their level of 'daringness' to help personalise fashion suggestions




Business goals, which could be equally useful to customers too, could be driven by:

- Cost reduction ambitions in other channels (e.g. customer enquiries via phone)
- Reducing return rates (by allowing last minute cancellation)
- Rewarding and incentivising loyal custom
- Providing discounts and rewards for referrals

Beyond the expected functionality, account features offer retailers a world of opportunity when it comes to innovation and creative utility.

### When I first joined Iglu we were launching a long-haul travel brand

"We decided to build a journey planner so people could start to choose from different options and get closer to a specification. People could input the same sorts of things they would otherwise key into enquiry forms – but rather than pricing up, it was more of a mood board for people's potential trips.

"Our target was mainly SE Asia – the sort of purchase decision that might be a year in the making. Letting people explore and find weird and quirky activities helped them on the journey towards a future purchase decision without feeling rushed in any way by pricing or availability.

"Similarly, if it's a product with a social element – ski for example, which is often a group thing – then letting people share information or make multiple part payments could be really powerful."

**Isabel Mack, Chief Product Owner (eCommerce), Iglu**

The key to developing ways that will provide value to customers in the 'My Account' feature is to think about the context of the purchase, and in particular the research and specification phases: What is the duration between realisation and purchase (and the repeat purchase)? What are people doing between these two points?

It's all about decision making. Think about what decisions your customers must make before completing a purchase, and how you can help them make these decisions faster or more easily.

## 6.7.2. Order status

Genuine online self-service can be a challenge given the number of systems that need to be brought together and plumbed into the website user interface to make them reliable.

For customers, the power to meaningfully self-serve is key. Order status systems need to make use of the latest available information on the status of an order, right down to the very most specific data available from the package courier if appropriate, and (accurate) progress bar delivery statuses are becoming the norm.

Figure 71: Royal Mail allows retailers to click through directly from order status pages and see delivery details, such as time and signature

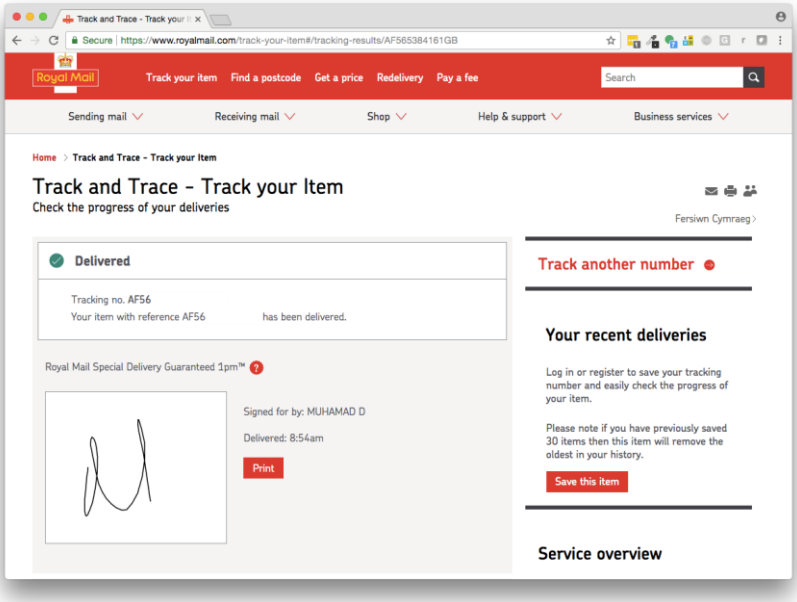
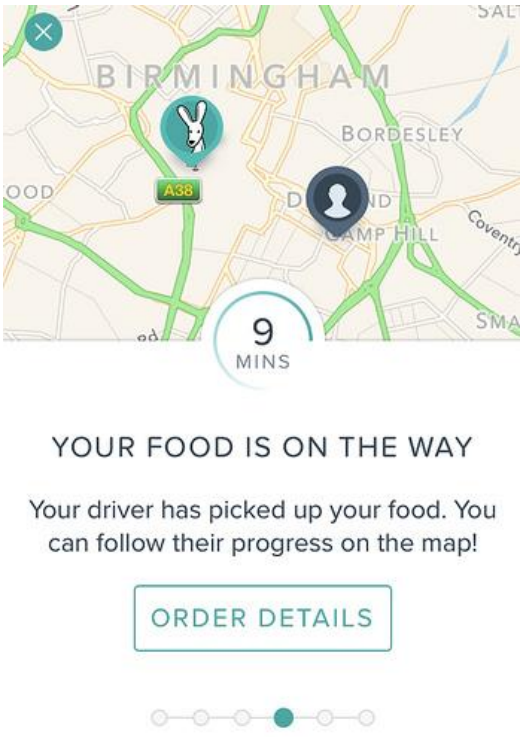



Figure 72: More time-critical delivery services like Deliveroo show real-time delivery location




*Source: digbeth.org*

Vendors selling personalised or more complex products could create exciting engagement opportunities with a feature as simple sounding as 'order status', which could follow the bespoke artisan basket maker who posts a picture of the 'work in progress' on the order status page and

emails a link to the customer, or the vehicle brand owner who takes production line data to show the car's progress. There are big innovation opportunities here for any brand.

### 6.7.3. Wish lists

Wish lists have several meanings and functions. Ian McAllister, formerly in charge of the Wish List feature for Amazon.com, describes them as follows:[22]

1. **Alternative to basket holding** – Customers will use wish list [rather than their basket] as a place to temporarily hold items during a shopping session. [Some customers tend to use their basket to hold items]. Once you add a wish list to a site you will see a decrease in cart [or basket] adds and an increase in wish list adds, but this use case alone isn't likely to lead to a significant increase in overall sales, just a shift in path.
2. **Multi-session holding area** – Customers may hold items in a wish list across sessions. Making the small investment of adding an item to a wish list on your site increases the likelihood that they'll return to your site because it is easier to find the item again than to start their search fresh on Google or elsewhere. It will also increase the likelihood they'll buy the item when they return to your site, even if they returned for another reason. This use case is more incremental than the previous one.
3. **Gifting** – If a customer makes their wish list public then there is the potential for gifting, which is highly incremental. Family and friends are unlikely to just stumble on to a wish list if your site is small, so getting customers to explicitly share them is important.
4. **Sharing** – Customers may share their wish list with family and friends who will buy gifts [from] it, but sharing creates incremental traffic and sales outside of gifting. Friends who receive a link to a wish list via email or on a social network may discover your site and specific products as a result, and then go on to buy them and become new customers. This use case is also highly incremental.

Other functions or opportunities from using wish lists include:

1. Allowing customers to see when out of stock items become available
2. Customising recommendations (both on-site and via email) based on wish list contents
3. Prompting customers to revisit and share their wish lists when their birthdays or other gift seasons approach
4. Driving sales by incentivising customers to buy from their wish lists – for example, offering free delivery on wish list items for a limited period of time.

### 6.7.4. Regular orders

Products-as-a-service is a huge commercial innovation opportunity for ecommerce retailers, and is explored in more detail in *section 7.2.2*.

Startup Pact Coffee's entire ecommerce functionality takes the form of a purchase flow where users are asked nearly a dozen questions about their coffee preferences, but without any progress bar to show them what "almost done…" means. They rely on the relevance of the questions to drive users to the final step, which is to enter account details.

[22] *https://www.quora.com/Do-wish-lists-help-convert-sales*

Figure 73: Pact Coffee's ecommerce function takes the form of a single journey

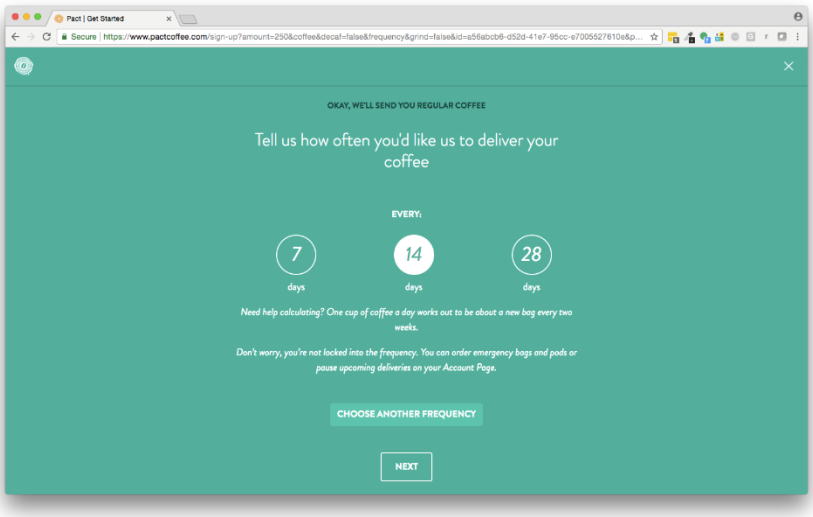
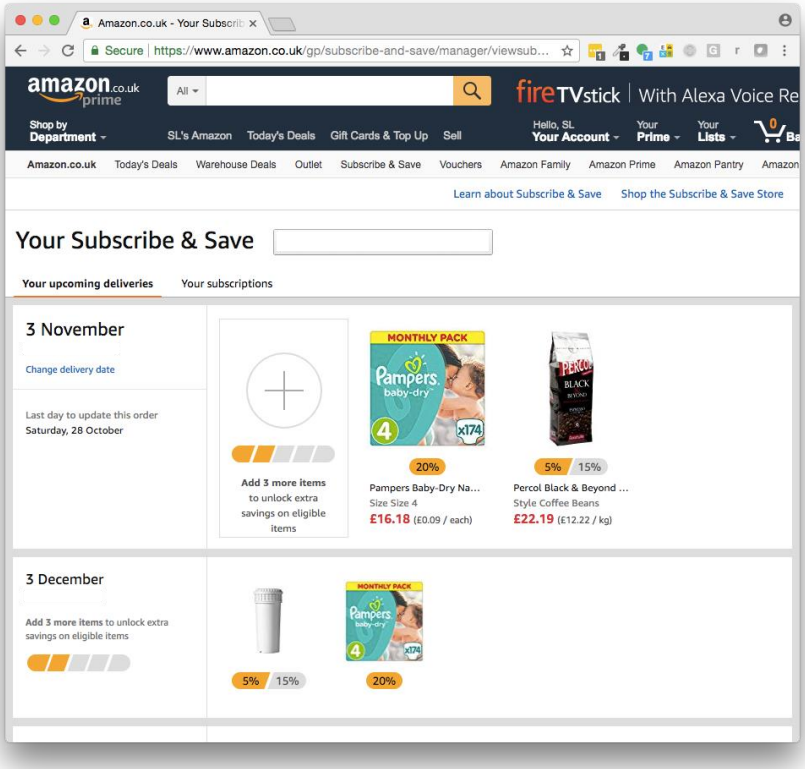



Figure 74: Amazon Subscribe and Save offers customers a range of products on regular subscription, with generous discounts for multiple subscriptions



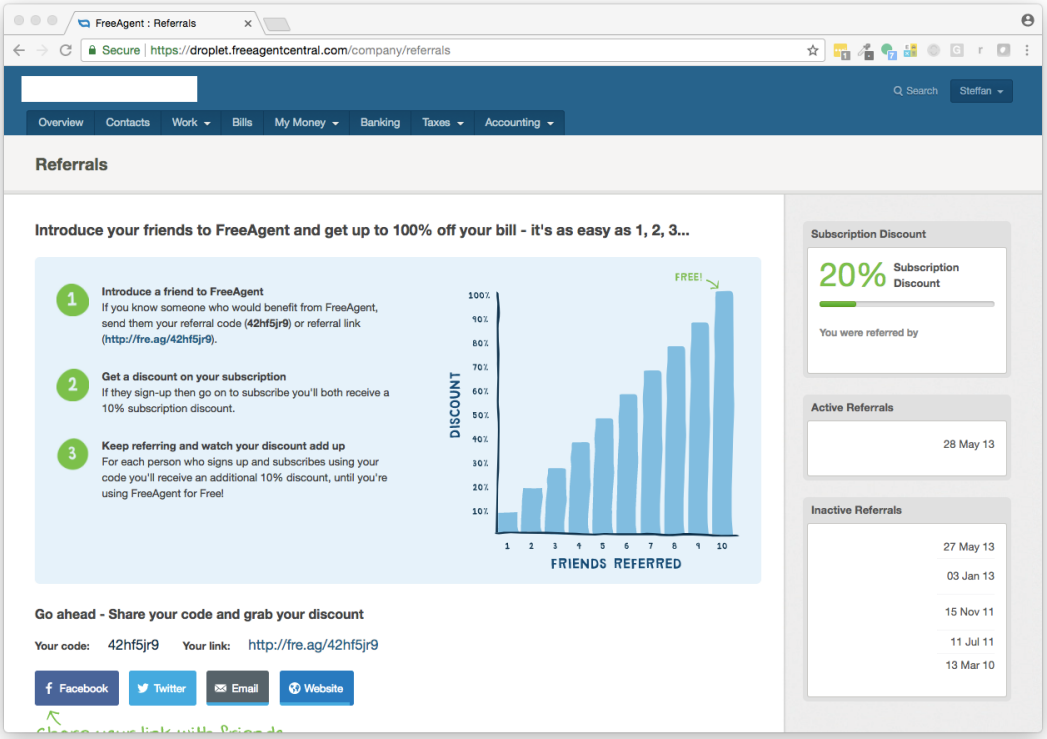

## 6.7.5. Referrals

Word of mouth existed long before the Internet, and electronic, tracked referral tools are just one way that customers can reward you for doing a great job. But they're generally felt to be under-performing by ecommerce managers, and careful consideration needs to be given to the timing of the reminder, as well as the design of the offer.

The commercial basis of referrals is usually a reflection of price point and business stage. Early-stage businesses that are in high-growth mode (for example PayPal, which spent $70m on giving away free money to drive rapid early growth[23]) may offer highly attractive incentives to help grow the size of the market. These tactics are typical of well-funded startups in new markets, including Dropbox, Airbnb and Uber.

The higher the sales margin, the more generous the referral programme can be. Some Software-as-a-Service vendors keen on market share, such as Edinburgh-based bookkeeping software platform FreeAgent, offer a discount of up to 100% (*Figure 75*).

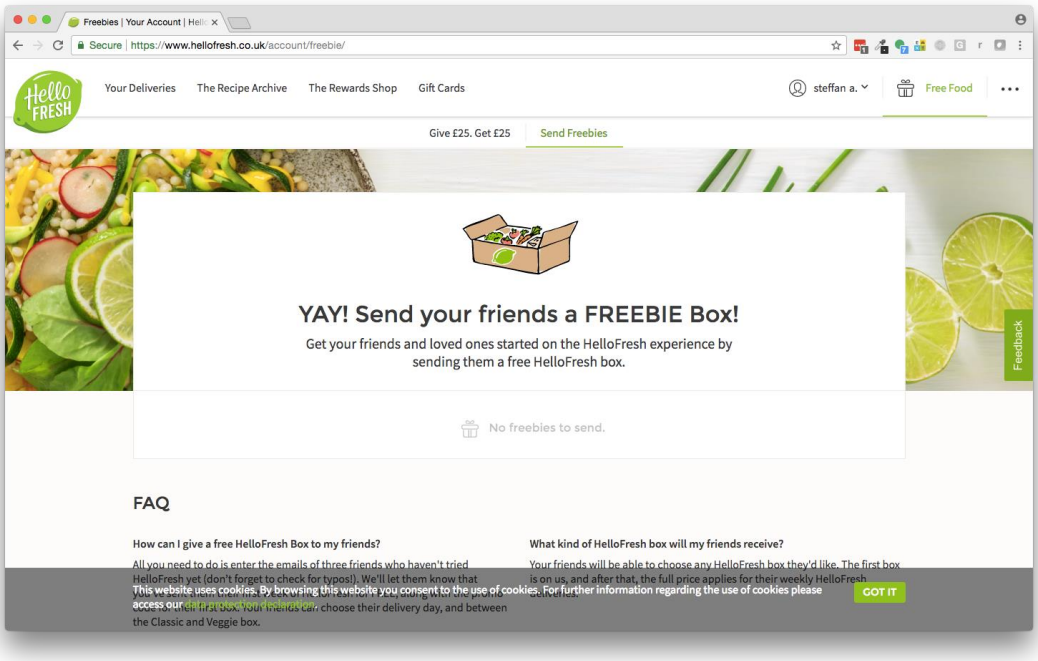
Figure 75: FreeAgent users can get up to 100% off their bill if they refer enough friends




Referral programmes for established retailers in sectors experiencing limited overall growth are usually geared to the same goals (acquiring new customers). They could also be geared towards rewarding more specific behaviour. For example, offering a £20 voucher or 15% discount to referrer and refer-ee on certain qualifying spend, such as spending over £100 or taking part in a flash sale, in order to increase order size.

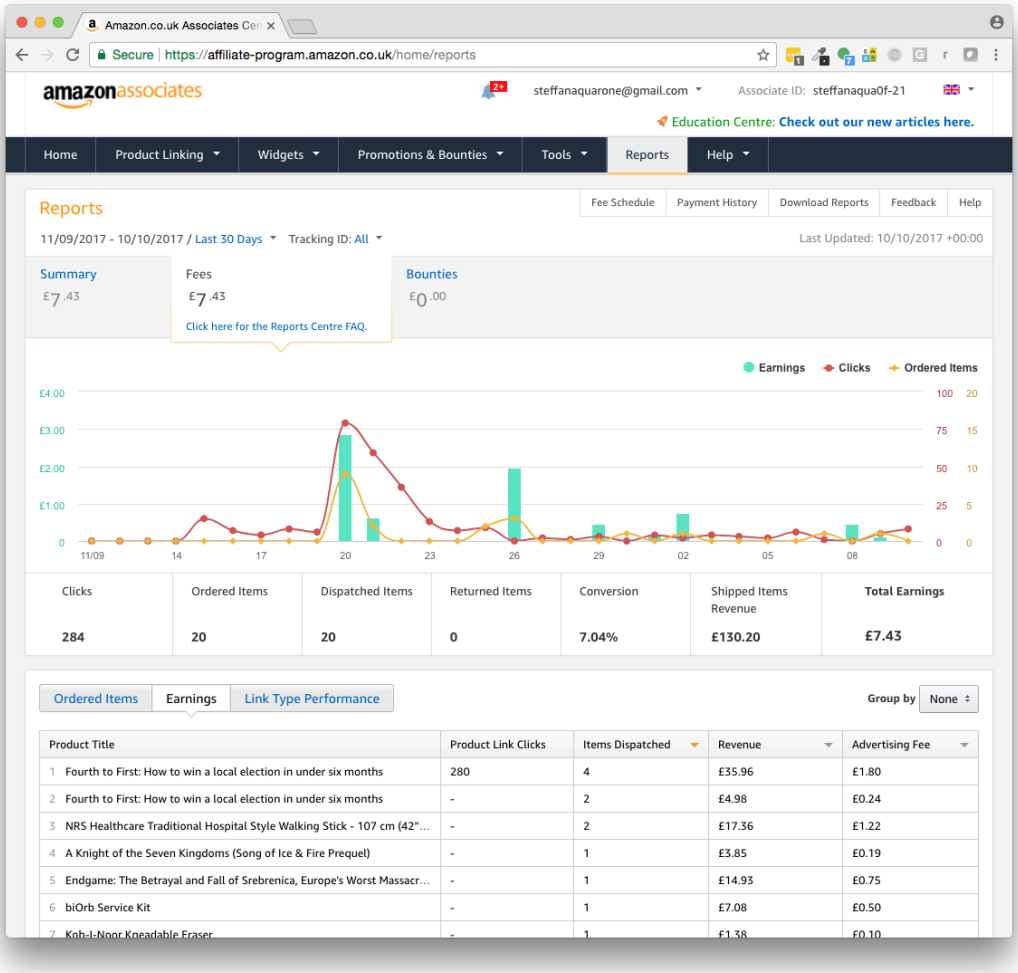
[23] https://www.youtube.com/watch?v=vDwzmJpI4io&feature=youtu.be&t=11m20s

Figure 76: Recipe kit service HelloFresh offers a choice of referral: account credit for both parties, or a completely free sample box sent to a friend




Some referral programmes allow high-value referrers to earn money from their prolific activity. Amazon Associates is cited as one of the early innovators in affiliate marketing but can equally be classed as a referral programme, offering any registered user a revenue share of all items ordered as a result of a customer clicking a tracked link – regardless of whether they are a new customer or not.

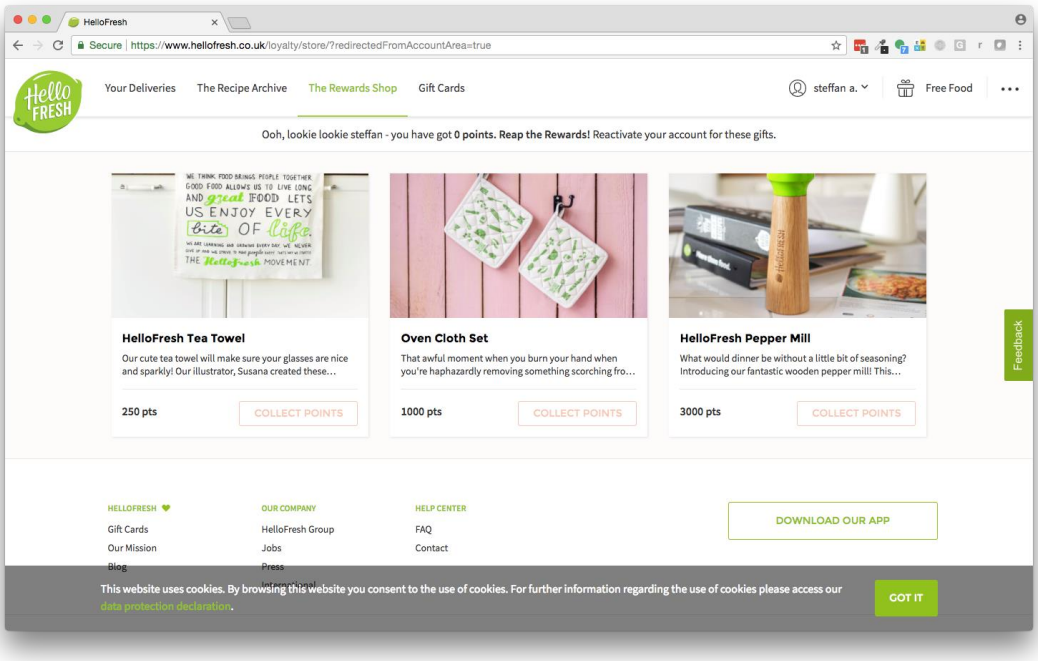
Figure 77: Amazon Associates lets people earn a share of revenue from all basket items whose sale completion resulted from a tracked link click




## 6.7.6. Loyalty & CRM

Pounds (in the UK) and percentages are the typical currency of referrals and loyalty programmes, but research by a major UK member website suggests free items may be an even better way of rewarding loyal customer behaviour.

Figure 78: Recipe kit service HelloFresh offers kitchen items rather than discounts in exchange for reward points




Loyalty marketing is a sophisticated industry and many ecommerce managers may simply want to opt for straightforward programmes. But a properly thought out loyalty programme could be the fuel in an ecommerce CRM strategy, and ecommerce managers may wish to consider the following questions in deciding on whether and how to integrate loyalty into ecommerce site design:

1. Loyalty touchpoints: is loyalty marketing purely a function of CRM campaigns based on spending analysis, or should loyalty status be a visible part of the 'My Account' feature?
2. Could making loyalty rewards visible drive conversion on certain product pages – even feature in the product summaries on search results pages?
3. How can loyalty earning be made seamless without being invisible, so users are reminded of the added value or reciprocal benefit they're enjoying by continuing with the same business?
4. How does ecommerce loyalty integrate with in-store loyalty rewards (best practice requires points to be able to be earned seamlessly in both environments, preferably without carrying a separate physical card) and is there a role for mobile in bridging the gap?
5. Loyalty isn't just about 'kick backs'. How can you design the experience simply to make it easier for people to buy again from your site rather than sign up elsewhere?
6. Are there other desirable ecommerce behaviours that can be tracked and rewarded within the loyalty scheme, not just sales?
7. How can overall customer behaviour tracking contribute to customer profiling so that loyalty programmes can be applied differently to different customer cohorts – rather than simply giving everyone some free points each time they spend?

# 7. Approach IV – 'Business as usual'

Throughout the guide so far we've referred to considerations that could be made at any stage of the ecommerce lifecycle, and for a small minority of readers there will likely already be a day-to-day need to ensure ecommerce orders are received and shipped.

## 7.1. Core responsibilities

Notwithstanding major development or improvement projects, the 'business as usual' role of an ecommerce team can be broken down into several core responsibilities, which are outlined in the following pages. Thereafter, this chapter presents a set of potential projects that ecommerce managers could choose to work on with the aim of improving overall performance.

**Keep profitable, and avoid the trend of focusing on turnover growth only**

"It's easy to be like a kid in a sweet shop, adding in features, plugins, engaging with third-party SaaS providers that all require a certain degree of compatibility, management time and costs.

"Too many businesses are rushing to pull in more staff and create the perfect team before the right level of organic growth. It's rarely the case of 'if you build it they will come' and you often need to sweat with what you've got, and start adding staff when it will truly add value. Don't forget the management time every new staff member will need to get up to speed before they create more value than they cost."

**Steve Mills, Director, Green Snow Online Fulfilment**

### 7.1.1. Setting goals

**We have no fewer issues than Amazon!**

"Focus and prioritisation and efficiency of process are absolutely key. We can't do 20 different things. We have an idea of where we want to do and what we want to improve. But the biggest question is: What are the next two to three things we need to focus on to achieve results?"

**David Kohn, Customer & Ecommerce Director, Heal's**

Setting effective goals is all about aligning ecommerce KPIs to business strategy, driven by the vision, in such a way that is relevant to the delivery of the business plan.

This might sound like common sense: sell more, make more money and satisfy shareholders. But organisations and teams can quickly get lost in the day to day of operational fulfilment, or delivery of software projects, and it helps to be able to communicate assumptions clearly so better decisions can be made about what to focus on as a given time.

Impact Mapping[24] is a strategic planning technique that prevents organisations from getting lost while building products and delivering projects, by clearly communicating assumptions, helping teams align their activities with overall business objectives and make better roadmap decisions.

Software is particularly prone to so called 'mission creep' – a gradual shift in objectives leading to waste, which is caused by gaps in communication. For ecommerce managers directly overseeing software projects, vision boards can help describe and validate product strategy to help communicate with business sponsors and delivery teams. Example tools such as Roman Pilcher's

[24] https://www.impactmapping.org/

Vision Board[25] can also help motivate development teams with the knowledge they are building something of value.

Aside from vision setting and product specification, typical commercial 'business as usual' can include:

1. Winning customers from competitors
2. Increasing the average order value
3. Creating uplift in sales for particular products
4. Cross-promoting items or selling add-on items
5. Increasing share of category spend

Within the parameters of ecommerce as defined, contributing to these goals requires a mixture of monitoring, data-led experimentation and inspiration.

**Winning customers from competitors** requires careful **monitoring of competitor activity** – whether pricing, levels of promotional activity or new features. Depending on the overall commercial strategy of the business, the ecommerce team may need to be **quick to respond** to price variations, or to deploy marketing tactics at short notice.

In periods of intense competition, a **'war room' approach** may be required, where commercial, marketing, ecommerce and operational stakeholders can gather and discuss tactics on a daily basis. In the background to all this it is the ecommerce manager's job to ensure system preparedness for any unexpected events such as unexpectedly high traffic volumes.

**Increasing the average total order value** invites strategies that require a mixture of marketing communications and ecommerce tactics. At the sharper end, tactics may include **delivery discounts, product discounts, bulk or bundle deals, cash back, and loyalty bonuses**. But at the more strategic end of the spectrum, customers may need to be informed about the breadth of the available offering, a task ecommerce teams can support marketing communications campaigns with by offering **personalised product recommendations for cross-promotion**.

When it comes to **driving uplift for particular products**, ecommerce managers need to consider where the **most appropriate placements** are within the site's user flows to position promotion and merchandising content. Consideration should be given to the appropriate prominence – as well as style and functionality – of promotional assets on the home page, in search results pages, on category pages and on product pages themselves for **cross-promotion**.

It may also fall to ecommerce managers to liaise with manufacturers who are keen on collaborating on promotions. Timing, performance monitoring, commercial fulfilment and stock management are all important considerations here.

Finally, beyond simply aiming to increase basket size, aiming at **increasing share of category spend is** a laudable goal. Building brand preference is typically a marketer's contribution to this, but the overall pleasure (or otherwise) of the online customer experience is a big factor in driving preference.

**'Sticky' features** like pre-saved payment details and frequently bought items lists can help prevent customers from buying items in the same category from elsewhere, but the ultimate lock-in of category spend can be achieved with either subscriptions (*section 6.7.4*) or "delivery passes", in which customers pay a fixed fee for unlimited free delivery.

[25] *http://www.romanpichler.com/tools/vision-board/*

On delivery in particular, specialist retailers face a mounting challenge from mega retailers who have been able to extend the benefits of these lock-in tactics across a seemingly never-ending range of categories, and serious consideration should be given to the potential need to remove separate delivery charges simply for the chance to compete.

Every one of these tactics can be tested, but the sharper ones will require a mixture of long-term impact assessment (both on customer lifetime value and brand perception/customer experience) alongside pure commercial uplift.

### 7.1.2. Performance monitoring

Once you have set your KPIs you need to work out the data required to measure them. This should include all functions across the whole of the ecommerce journey, including order management and fulfilment.

Constantly monitoring key performance indicators is a vital function of the ecommerce team. With myriad data sources to consider, it's unlikely a team will be able to rely on just one analytics product. Different platforms will have different strengths and be subject to different issues. The underlying sales and order performance data, for example, should always come from the order management system rather than a third-party web analytics platform where all sorts of interruptions could cause incomplete data.

**High level trading KPIs** answer the basic question of whether the ecommerce team is performing, meeting targets and providing the business value that it's there to deliver. Daily monitoring against KPIs, and looking at daily as well as week-on-week data is the norm.

**More nitty-gritty performance monitoring** involves detailed journey analysis – what's changed week on week, to what extent have changes to the site affected overall funnel performance, etc. As a routine health check, all core journeys should be inspected to ensure they are all performing as they should be. The frequency of running through campaign performance with marketing teams will depend on whether the business is trading normally or in a critical period (it may form part of the 'war room' routine in the extreme case of the latter). The central question here is whether the proposition or campaign that has been put out on the site has worked as expected.

**Real time performance has** increased in prominence in the past couple of years. Many ecommerce teams run big status screens reporting on the core site journey so anyone in the team can watch make sure people are going through the funnel as they should be. The minute something happens, such as a payment service provider going down, the team are alerted to it even before it's reported. But this dashboard approach could also be used to monitor core customer journeys and carry out user experience improvements.

Google Analytics has started to roll out real-time event logging options, and specialist platforms can be plugged in to offer dedicated services.

Some of the most valuable performance data may come from third parties or other areas of the business, such as product return rates, so don't just look at the customer behaviour on the website as reported by web analytics.

Accurate performance data is probably the single most important responsibility of an ecommerce manager. Without it, you can't tell if you're going to meet targets, or whether what you're doing is going to improve your position.

Ecommerce teams are often held to task over accuracy of reporting, which does require an element of self-discipline. The ideal scenario would be to have a team member dedicated to data and analytics (*section 5.2*). Delving through the different data sources can be a full-time job, and

having a dedicated resource means questions can be fed in from anyone in the team. It also means data interrogation can be done in a robust and systematic way, by asking the right questions, performing the right operations on data sources, identifying compromised data and upholding the principles of statistical validity.

The dangerous alternative is that data and analytics are passive and user operated: it's very easy to log into a system, particularly one that renders key data visually, and to only see what you want to see.

Data accuracy alone is insufficient for driving change: there must also be **insight, and action.** Ecommerce managers must have a plan for how results are reviewed and shared with the business, and how agreed actions are going to be enacted. There's no point producing a massive weekly reporting pack if you then don't know either what good looks like or what to do if it looks like you're on track to miss targets.

### 7.1.3. Overseeing the programme plan

Depending on the organisation of your ecommerce team, and the chosen methodology of your developers, you may or may not be the 'scrum master' directly overseeing the development of code. *Section 5.5* explored why long-term features road maps can lead to delays and inertia, so an ecommerce manager overseeing the day-to-day development of code has a responsibility to uphold the principles of the chosen development methodology and ensure planned work is carried out, meets specifications and conforms to organisational quality requirements. Good lessons can be borrowed from Agile Product Owners.[26]

Beyond or notwithstanding this oversight, running the overarching programme plan requires ecommerce managers to be clear about what each change will deliver and which goal it supports (back to impact mapping). Ecommerce managers need to keep a handle on the impact of changes, new features and other investments, beyond the management of the development of code.

Having consulted with developer teams on size and feasibility, aim to deliver what has the most business value first. Even if the day-to-day development follows a strict agile methodology, you can still think about the overall plan in terms of key releases or milestones.

As well as being part of the team that specifies a particular change, you will need to ensure sufficient means are in place to measure the impact of the change and then potentially rejig or reprioritise the longer term plan as a result.

**I split my own roadmaps into the concept of releases, although we deploy all the time**

"I work with key stakeholders to agree my key themes (things that align to the business strategy – that might be adding new suppliers, improving UX 'hygiene' and supporting international sales) and then I try to deliver a couple of changes for each theme within each release.

"Releases are time-boxed and if we don't finish (or look like we won't finish), then we review business value (including risk) to see if it is still the same and adjust. I tend to have four sprints in a release so at the end of each sprint there is a chance to change; I then update the roadmap accordingly.

"This constant review and adjustment with core stakeholders is the key, and it always comes back to business value. Don't be afraid to change plans, but understand the cost that may be associated with doing so. Ensure clear communication – all members of the business should be able to see and understand this as it needs buy in from those who sign the cheques off to those writing code."

**Isabel Mack, Chief Product Owner (eCommerce), Iglu**

[26] http://www.romanpichler.com/blog/10-tips-creating-agile-product-roadmap/

Similarly: part of the job is carrying out research as to the best areas for consideration, and choosing the extent to which detailed feasibility and impact assessment is required vs. an element of gut instinct. Ecommerce teams that operate in a sector where there are certain highly advanced competitors may simply say that a business case does not need researching, and that the choice to invest in a particular project or feature is simply down to the fact the market leader has deployed it permanently, indicating that it is either effective, or commonplace (or both).

## 7.1.4. Managing risk

A lot of the ability to research and prioritise the contents of a programme plan, and adapt as it runs, depends on the relationship between ecommerce managers and technology delivery teams. Being able to make changes or change plans quickly is important, but depends on having a platform that allows them to make continuous changes. Not having the ability to carry out continuous deployment is a big disadvantage – a routine that involves only five releases a year will see the most valuable opportunities (not to mention experiments) pass by between release dates.

In busy ecommerce environments, the potential for site changes to cause outage is a big risk with significant commercial consequences. Basic IT best practices will help, such as running **separate development and production environments**, running regular off-site backups and using load balancers in case a new feature works but places unexpected demands on servers. But load balancers are only good if they are maintained, and the same goes for firewalls: general "sys admin" functions cannot be overlooked for long without something big going wrong.

Risk analysis also extends to road map considerations: as well as service interruption risks, there will always be a risk to *not* carrying out a particular improvement. Risk reduction tactics include developing quick, quite crude prototypes to prove a concept, even if purely internally, to sell the value of the undertaking.

More traditional publicly-releasable prototypes could qualify the value of a project prior to its full deployment, especially if it can be offered to a small sample of site visitors. More about testing and prototyping can be found in Econsultancy's Innovation Best Practice Guide.[27]

### A bit of a rescue job was top of the list at first

"I inherited a situation where the business had both re-platformed and moved ERP system in the previous nine months. It was really a bit of a rescue job in the first few months. Our main priorities were driving traffic, which suffered with the website re-platform, and trying to increase conversion, which also suffered due to some site design and performance issues.

"Now that we've stabilised the site and driven some solid growth, we need to work out how to keep that growth going, so that the online business can grow at a rate commensurate with the overall ambition of the business.

"Our main focus is now on user experience. We turn over an eight-figure sum online – which is not insignificant, but traffic and transaction volumes are not massive, so getting meaningful results from A/B testing is hard. As a result, we tend to rely on research plus our own experience and partners' skills to drive user experience improvements."

**David Kohn, Customer & Ecommerce Director, Heal's**

[27] *https://econsultancy.com/reports/innovation-2017-best-practice-guide/*

### 7.1.5. Hygiene

Not everything that can go wrong can be reported on a real-time dashboard.

Even in a pure ecommerce business there are a lot of moving parts, and you've got to be aligned on what's happening every day across the business.

Some of the important factors in ecommerce performance will need a checking process that could include:

- Checking the performance of **third party APIs** on which the business relies – are they all performing?
- Reviewing the **status of each technology component** – are they all working? Were there any overnight logged errors?
- Ensuring **inbound referral sources** – any or all of them – are working. Are sales coming from all known sources?
- Checking whether **this week's promotional campaigns** (email, PPC) are delivering a consistent message across the customer journey. For example: are all messages in active PPC campaigns being reinforced on the landing pages the ads are pointing to?
- Seeing if there are any **operational load issues** on the horizon – can anything be done to reduce risk (for example: staggering email sends)?
- Ensuring that **load speed targets** are being met across all aspects of the site.

### 7.1.6. Researching and reporting

Ecommerce managers who are active in their field will likely have a clearer view on emerging trends than others in the business. Acting on this insight involves keeping an open mind about how general digital trends could have an impact on ecommerce, for example: data privacy concerns, voice commands and visual search/selection.

An element of this will involve briefing marketing colleagues on the latest developments in ecommerce including research into customer behaviour, both from the organisation's own ecommerce site and based on general industry reports. But research into the landscape of the sector is important even within regular performance reporting: based on what's going on in the marketplace, and in the business, are you seeing what you would expect to see?

**Further reading**

**Digital leadership: why change management is key to ecommerce success**
https://econsultancy.com/blog/69001-digital-leadership-why-change-management-is-key-to-ecommerce-success

## 7.2. Optimisation projects

If your ecommerce site is working well and achieving targets, then it may be time to undertake an optimisation project, which can be thought of as going out and looking for trouble. It normally starts with funnel analysis to see where in the core journey things could be improved, starting at the end and working backwards. The usual headline suspects are likely to be payment detail entry pages, abandoned baskets and popular site exit points.

A typical dilemma in ecommerce is between whether to focus on increasing traffic (on the basis that if you 'throw more at the funnel people will sort themselves out into customers') vs.

optimising first. The missing question in this debate asks what sort of customers the business is trying to optimise for. Different tactics will have varying effects on different types of customers and you can't be all things to all people. So: short of engineering radically different flows based on traffic source (which is an option), optimising for growth is best done with a primary target segment or cohort in mind.

### 7.2.1. Conversion rate optimisation

Once you've defined your target segment, optimising conversion between steps in any journey is a strong candidate for daily attention.

Before reaching for the whiteboard to re-engineer designs, the recommended steps to take after a conversion optimisation opportunity is identified are as follows:

1. Make sure the analytics team has the right tagging in place so that the picture being painted is accurate. The drop off that you're seeing could be caused by broken page tags, or UTM parameters not being passed properly for certain sources.
2. Check whether a specific platform, device, etc. is responsible for a disproportionate amount of errors. It could be a rendering or compatibility issue that simply needs fixing, which may be as simple as the call to action button not being visible on an iPad.
3. Get a quality assurance or test team to make sure they're confident the core technology is working in as many scenarios as they can think of.

If all three come back negative, then get a UX team to take a look. They should start by talking to customers, doing some sort of survey, or carrying out ad hoc data analysis. Contacting people who have been in touch via customer services about issues at a similar stage of the journey might be a good place to start, even if at the time they were unable to provide a sufficient description of the problem.

**I've recently created a position of 'UX consultant'**

"The person who does it used to be in telesales because he frequently got calls from customers really struggling with different aspects of the site, looking for information, and in a situation where we don't have much research budget, getting that hands-on customer feedback is fantastic. I created that position specifically to identify areas for improvement.

"We also have the luxury of being next door to the shop so we can talk to staff members which is very valuable, because they're on the website a lot, and they talk to customers."

**David Kohn, Customer & Ecommerce Director, Heal's**

If you decide experimenting with a different layout is the way to go, then some sort of A/B testing should be used to test your hypothesis.

A/B testing sounds simple but it can be badly executed. The most common faults are either not having sufficient sample sizes to make meaningful (or accurate) conclusions, or running over-ambitious multivariate (MVT) tests that can lead to conflicting results about certain elements.

## I was one of the early adopters to A/B and MVT ecommerce testing

"People need to start engaging common sense, and use data-heavy analytics alongside qualitative measures such as lab or remote UX testing.

"I've heard too many people say they will have an MVT-only approach to ecommerce development. This is dangerous because there are limits to MVT. Once you start segmenting your tests, you can quite quickly find that version A works for new customers, whilst version B works better for returning. Do you start segmenting content on the fly (resource cost + possible dependence on third-party tools) or pick what's more important out of new vs. returning customers? Then how does it work for someone in Spain vs. the UK? Or someone buying a low-value consumable versus a high-value highly considered purchase?"

**Steve Mills, Director, Green Snow Online Fulfilment**

All the activities here should drive out actions: either changes to be made to content, pricing, user interface design, or technical changes like new or tweaked functionality.

## Further reading

**How A/B tests improved add-to-basket levels by almost 30%: Case study**
https://econsultancy.com/blog/67235-how-a-b-tests-improved-add-to-basket-levels-by-almost-30-case-study

**Ask the experts: Conversion rate optimisation trends, challenges & strategy**
https://econsultancy.com/blog/69447-ask-the-experts-conversion-rate-optimisation-trends-challenges-strategy

**Five predictions for conversion rate optimisation (CRO) in 2017**
https://econsultancy.com/blog/68648-five-predictions-for-conversion-rate-optimisation-cro-in-2017

**Conversion Rate Optimization Report 2017**
https://econsultancy.com/reports/conversion-rate-optimization-report/

# 7.2.2. Checkout abandonment reduction

Checkout abandonment is traditionally perceived as a major inefficiency for ecommerce businesses. But there's a counter argument that asks: what's the actual cost that causes the perceived inefficiency?

Numerous studies have attempted to analyse the reasons people do online that which is only rarely done in the real world: abandon their carefully selected items at the checkout.

It's important to distinguish between basket abandonment (people placing items into their baskets and then leaving) and checkout abandonment (people leaving during the payment or registration process). But unlike in real world stores, neither basket abandonment nor checkout abandonment actually *costs* anything to online retailers, and this behaviour could serve as a useful source of data for businesses.

The key question to ask is: What are people doing next? And what tests and techniques could you design to improve overall performance by learning from this behaviour?

If visitors are abandoning their goods at the checkout, never to return, then simply running with whatever changes make the difference to conversion might be the best way to achieve performance improvements.

But if customers are using the ability to select, specify and see the final price as part of their research behaviour, then tactics like checkout isolation (removing all other navigation options from the checkout page) could reduce overall performance if the experience makes people feel like they're being pushed prematurely towards a purchase.

As discussed in *section 7.2.1*, it's quite possible that payment processor issues are to blame for a significant proportion of abandonment, so be sure to check through the same steps before reaching for the whiteboard and starting to draw isolated checkout wireframes.

In studies, "using the shopping cart to research" ranks consistently in the top three reasons visitors give for abandoning the checkout. Even within this account, ecommerce managers should be asking whether customers are returning to the site after their research, or buying offline having never intended to complete a purchase via the site.

These possibilities suggest different optimisations: in the case of the customer coming back later, a carefully planned automated email campaign could be used to remind customers of the basket they put together. Such a campaign could have the goal of bringing customers back to the site to complete a purchase at a later date.

The "intend to buy in the real world" reason could, however, be serviced by offering an incentive such as a mobile voucher to complete the purchase in the same retailer's store.

The true art of reducing the wrong kind of shopping cart abandonment lies in following some common sense principles, and then using surveying and analysis to optimise around these principles rather than around raw conversion.

### Principles for avoiding checkout abandonment

- Limit distraction without removing the ability to go back as well as forwards (*section 6.6*).
- Ensure trust at the crucial points, using hallmarks (*section 6.6.3*) or user endorsements (*section 3.2.4*).
- Summarise the customer's choices so they can see what they're buying and how much it's going to cost, consistently throughout the journey without adding extras.
- Show state using a progress bar or other visual indicator like an accordion design (*section 6.6.1*). Show people how far through the process they are and what happens next (although in some cases the opposite could work best – see *section 6.7.4*). This is more important the more complex your specification and checkout process is.
- Communicate delivery options upfront so people don't need to go halfway through the checkout process and quit in frustration if you're not providing them with the service they want.
- Make the steps conform to some sort of standardisation like Basket, Login, Delivery, Billing, Completion – even if your process is unavoidably more complex.
- Ensure the checkout process is simple, fast and intuitive.
- Offer help in case customers are abandoning purchases because they have unanswered questions (*section 3.2.9*).
- Check error logs and avoid data entry methods like "post" (a method by which web servers can accept data) that can throw up warnings that put off non-expert users.
- Consider offering alternative steps like "remind me to come back to this in a week", "let me buy this in store" or "save basket contents to a wish list".

Some of these principles might seem quite values-driven – and there are alternative approaches to conversion rate optimisation that use all sorts of tactics to increase conversion and spend that may not be entirely transparent.

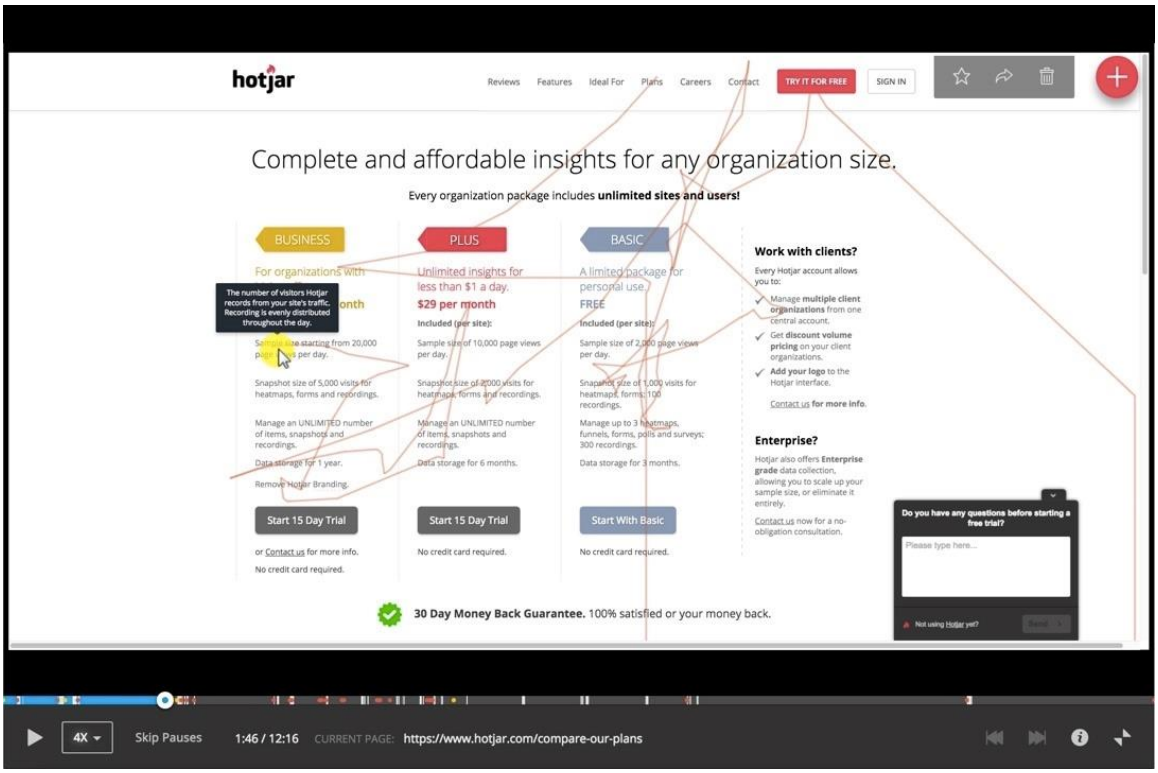
So-called 'dark patterns' are explored on https://darkpatterns.org/ in an attempt to raise awareness of the practice used by some sites in which a customer signs up to a service they didn't mean to. Bear in mind that using these sorts of tactics could breach consumer law as well as cause reputational damage.

Frequency is another consideration: if you want a customer to shop with you every few weeks, then any obfuscating tactics are going to grate.

**Testing checkout abandonment**

Providers like Hotjar help businesses identify usability issues on their sites by showing them recordings of real visitors' journeys. By tracking clicks, taps, cursor movements and typed content on the page, such systems provide video representation of your visitors' interactions with your site. Not only this, but they can also trigger requests for feedback on their experiences. These tools can help you spot what's going wrong much more quickly than data analysis alone.

Figure 79: Hotjar lets you monitor visitors' clicks, taps and mouse movements so you can identify usability issues




Remember to calibrate any experimentation or testing carefully based on traffic volumes – consider how much data you need and how 'genuine' some visitors might be. Focusing on too small a group could result in accidentally optimising around competitors or site scrapers (or best practice report writers). High traffic volumes let you run tests quickly and still have a good sample size. But as booking a holiday has nowhere near the same volumes, tests for these businesses will need to run for much longer.

The key lies in understanding how many times people visit you before they make a purchase. Look at conversation rates by cohort, comparing first time and repeat customers at the very least.

You need to understand people's purchase behaviour before you can work out whether abandonment is good or bad. If people are buying after five visits on average then don't worry about trying to optimise away abandonment in the first four visits or you might end up with fewer sales. When testing checkout abandonment tactics, be sure to compare regularly to benchmarks.

## Further reading

**13 examples of dark patterns in ecommerce checkouts**
https://econsultancy.com/blog/68973-13-examples-of-dark-patterns-in-ecommerce-checkouts

**Ethical CRO: The end of dark patterns**
https://econsultancy.com/blog/68887-ethical-cro-the-end-of-dark-patterns

### 7.2.3. Search tuning

As we explored in *section 6.2.3*, whilst there is a science behind all site search algorithms, any resource you can muster is going to be pitted against the might of Google.

But your search algorithm has something that Google doesn't have: the huge benefit of reliable input data. Every product has attributes and description elements whose accuracy is assured, as long as the data is inputted accurately.

The science of search tuning is all about tweaking the impact or 'weighting' of different factors in determining the order of results on the search results page. Analysing what people are actually searching for and what they see can yield more than empty hypothesising or data-free analysis.

A key consideration is **keywords**. It's important to think about where on the product page the most likely keywords are to be found, and to ensure the search algorithm is treating keywords in those places with greater weight than elsewhere in the product details. Ranking is required to differentiate keywords in the product name, short description, long description and elsewhere.

Other signals will need to be chosen in order to rank the results. For example: if two pages are equally matched for keywords, what additional variable will determine their placement? Sales volumes over the past 30 days, perhaps? Negative signals like low stock might also be necessary to suppress certain results.

Your search algorithm also needs to consider the difference between **direct matches of keywords**, and **attributed values** such as colours (that may not appear high up in the product description but may need to be used to narrow the search results). Furthermore, it should be primed with a list of common synonyms that can be treated as if they were searched-for terms, as well as to display suggested search terms if this feature is to be offered.

Search tuning itself is underattended in many ecommerce teams because it can be fiddly. But after having defined your algorithm's parameters and implemented a naming and tagging convention to ensure product pages are indexed by site search and returned as results, search tuning is what will make the big difference to actual customer satisfaction.

Most search algorithms use Boolean operators to connect and define the relationship between search terms. The three operators are AND, OR and NOT: **AND** narrows the search: all the keywords will be present in the retrieved records; **OR** broadens the search by connecting two or more keywords or synonyms and **NOT** excludes any records that contain a particular keyword.

Advanced search users sometime use these operators explicitly in the search string (e.g. typing "blue AND shirts") but most ecommerce site visitors will simply type in keywords. A key element,

therefore, of search tuning is observing actual search strings and building rules that can be used by the search algorithm in place of explicit operators.

For example, after observing that searches for a seasonal keyword such as "winter" often comes before or after "coats", the algorithm should treat such searches as though the AND operator were being used. Alternatively, if you identify lots of searches for winter coats that result in very few results (because not all coats may actually be tagged "winter") then the search engine needs to know that "winter coats" actually means "coats NOT summer NOT spring NOT autumn".

**Refining synonym lists**

A site search engine may already be set up with common synonyms and misspellings, but unusual product names have their own misspelling potential, and current trends may call for new vocabulary to be added to the synonym list. Using analytics data of search queries will let you see exactly what people are typing in, letting you determine what synonyms to set up. Don't forget phonetic synonyms that may result from speech-based text entry.

**Adjusting the weighting of the algorithm**

Reviewing the products that are most often clicked through from the search results page alongside the search terms used can tell you which products meet the needs of the user, allowing you to optimise your site search by ranking those products higher for the same search phrase in the future. This analysis could also improve suggested or auto-complete search features.

**Alternatives**

Even if you don't stock an item, such as a product by a particular brand, then providing alternative results is surely better than "no results found".

'Alternatives' lists can be created to function in the same way as synonyms, but be sure to signpost the results page clearly rather than frustrate users by implying you've found what they were looking for.

**Poor, low or zero results searches**

Zero results pages can be a valuable source of information for ecommerce managers, not just for fixing issues, but also for discovering products customers are interested in buying.

Poor results pages can include too many or too few options. Try looking at a report of all the search results pages that didn't result in any filters or clicks being applied, or where fewer than five or more than 50 results were returned.

## 7.2.4. Make search tuning a routine

A lot of site tuning is down to routine. Along with the activities already listed, the following inspections should be given regular attention:

**Top 100 search phrases** – see what results are actually returned from the site search.

**20 recent "zero results" pages** – see whether new alternatives can be created.

**Overall click rank** – is the majority of clicks from the search results page coming from the top listed items? If not, where are people clicking instead? Asking these questions can help you tune the weightings of different signals in the search algorithm to return more relevant results.

**Site exits from search results pages** – these reveal some of the worst performing parts of your site, but you don't have direct editorial control over them. Instead of only optimising the checkout process, try investing time in this area where you're more likely to lose customers, and ensure they are seeing what they should (are there products, for example, that don't appear in search results but are relevant?).

You could also consider why people came to the site to look for something that clearly isn't part of the range – are there ambiguous or misleading messages going out in customer acquisition campaigns?

**Non-product search terms** – these can help you identify other content people are looking for. If browsers are regularly seeking buyers' guides as opposed to products, then perhaps increasing the weight of these terms in the algorithm, and even displaying content results differently to product results, could help. Non-product search terms could also reveal content opportunities waiting to be filled.

**Produce regular overall search performance reports** – for example: percentage of search vs. browse for initial engagement, conversion from search results to product page click and conversion from keyword search to purchase.

### 7.2.5. Wider learning from search data

The keywords that customers type into your site search are a source of data that can be used to learn more about your customer behaviour.

Analysing the language people are using to describe products – beyond building synonym lists – can help adjust the language the business uses to refer to products and services and make it more in tune with customers.

The search behaviour of existing customers is a good indication of intent, and further examples of products that have been searched for, if the search doesn't result in a purchase, could be remarketed to customers both on the site and later via email. Understanding the level of usage of site search among different customer segments can help you prioritise different site features too.

The way people search for products on your site is also an indication of the words they might use when they search on other search engines, and site search data can be used to improve search advertising and SEO. Likewise, analysis of the most valuable keywords (the site searches that lead to the highest sales) can help paid advertising teams focus their keyword bidding.

#### Further reading

**Developing ongoing search tuning processes**
http://www.flax.co.uk/blog/2016/04/13/developing-ongoing-search-tuning-processes/

**Other optimisations: 10 Ways to Increase Average Order Value**
https://www.oberlo.com/blog/increase-average-order-value

# 8. Conclusion: opportunities for transformative innovation

One can't help but notice that there hasn't been much *transformative* change in ecommerce despite its fairly established life. Businesses are still assessing the merits or otherwise of maintaining direct channels vs. selling through marketplaces: weighing up the pros and cons as if they were thinking about concessions in department stores vs. opening their own outlets on the high street.

Transformative sector change has been seen in travel and media, but we're yet to see wide-scale changes across the piece, the likes of which cause severe disintermediation in and disruption to established industries.

The reasons for this are fairly straightforward:

Shopping has (almost) always existed, and shopping online still has many similarities to its real-world equivalent, mainly due to physical restrictions around the movement of goods. Being able to order from home, and receive goods by post, has a provenance dating back to the early use of the telephone. So it's little wonder the revolution in ecommerce has been more gradual than, say, the sudden arrival of something more novel like real-time, global conversation (social media).

Ecommerce has also suffered from inertia: sticking to certain behavioural rules in order to seem familiar and secure enough for people to feel comfortable – especially around payment security – and allow them to compare features and benefits of products and vendors.

Selling online isn't only the preserve of the big. With the right product and a bit of discovery, anyone can sell anything on the web. But most innovations in these circumstances still seem to be broadly iterative or augmentative – buying *more* types of stuff from a particular retailer, or buying more easily and quickly – rather than transformative. It's one of the reasons the techniques in this guide are so numerous: smart people have had decades to perfect the art of site navigation, product pages and checkout processes.

In the material world, physical restrictions have kept the process of merchandising and buying relatively staid. But in the digital world, where supposedly few of these restrictions apply, there are equally solid factors preventing change. Payment online, for example, is mainly restricted to credit and debit cards. While small innovative brick-and-mortar retailers are able to participate in local enterprise trading schemes, run customer 'tabs' and set up standing orders, ecommerce retailers are stuck in a world where every transaction involves a purchase, a parcel and a 28-day returns policy.

Some of this standardisation has been fantastic for customers. But it is a problem for retailers: we may be optimising our websites to the point of near-seamlessness, but from a competitive advantage point of view, we're optimising to zero. The natural conclusions of this are commercially problematic: projecting forwards to where either the gig economy or Amazon becomes the gold standard of parcel delivery and almost all of the original 'forces' of marketing will have been eroded: price being so transparent as to converge on the lowest workable margin at scale, positioning being more about brutal search than merchandising, and place being removed completely as a factor.

In this future, it could be manufacturers, not retailers, whose creativity and innovation earns them competitive advantage. Retailers, as we currently know them, may not even have a role, the storage and moving of the boxes having been taken over by general logistics and infrastructure companies. Then true transformation will have arrived – the Uber for retail – and all that's missing could be a few years of cultural normalisation.

Some of these things are starting to change, but interestingly, they're changing as much in the real world as they are online: stores like Nespresso that only feature one product; "concept" outlets like Tesla that are more like an exhibition than a store, designed to invite customers into their brave new worlds; and temporary pop-up shops that ignite excitement through scarcity.

While mega marketplaces like Amazon extend the no-brainer benefits of selling through large aggregators, single-product vendors – like Tile, the Bluetooth key finder fob – are building their own momentum (often helped by crowd sourced finance) leading to direct sales channels.

Perhaps all that can be deduced from this is that people like trying new things. But the change that's teetering on the horizon could be big, and it could happen fast: even if they don't instigate it, big business will capitalise on innovation quickly once trends start to emerge (think artisan coffee, locally produced food, craft beer).

Doing this effectively requires us to park all our ideas about the role of ecommerce, and question whether our customers even need to operate via an ecommerce site, as we conceive of it today. Sure, it works for us in that we can process orders, take payment, and get people to specify exactly what they want and when they want it. But perhaps part of the role of modern ecommerce is to do more of that work for our customers – and stop being a 'gate' in their enjoyment of a smooth, seamless life.

Retailers have the potential to incorporate this change into their businesses, but it will likely involve reframing the role of retail rather than iterating and optimising it. And reframing means standing back and thinking not "how can we make our ecommerce site better", but "does our ecommerce site even have a role in the ideal journey our customers could make and if so, what is it?".

Only by really scrutinising concepts like convenience, customer loyalty and value, can new models and opportunities emerge. For example:

- The pay as you drive, crowd-sourced insurance company that charges based on actual driving data.
- The home food delivery service that delivers containers of fresh sauce to people's doorsteps, ready for them to heat up and enjoy with their chosen home-cooked protein and carbohydrate.
- Or the shopping assistants that analyse every household transaction in a given month and recommend different buying and lifestyle choices to optimise around goals like cost reduction, health and wellbeing or environmental consciousness.

Possibilities range from the eerily familiar (remember the milk man?) to the far-fetched (3D printed everyday objects). But the retailer that can lead the change and bring its established customer base with its will truly begin to conquer the future. And although these innovations may not involve product pages, checkouts or card processing, it will be down to ecommerce teams to work out how to "make it work".

Meanwhile, there is plenty of work to be done making the way things work today, work better. The fact that the design abortion of 3D Secure and Verified by Visa still exists is testimony to how far ecommerce best practice has still to come.

## Further reading

**How machine learning can set fashion ecommerce strategy & product assortment**
https://econsultancy.com/blog/69431-how-machine-learning-can-set-fashion-ecommerce-strategy-product-assortment

**An introduction to AI-powered ecommerce merchandising**
https://econsultancy.com/blog/68921-an-introduction-to-ai-powered-ecommerce-merchandising

**The seven stages of smart ecommerce marketing**
https://econsultancy.com/blog/69488-the-seven-stages-of-smart-ecommerce-marketing

**The future of retail: Is your business prepared?**
https://www.econsultancy.com/blog/68913-the-future-of-retail-is-your-business-prepared