



# The curse of the Internet

Mediocre e-commerce assaults us with poor usability and lousy content. So what are the ingredients of success?

Paul Theroux, the US novelist, said, "Gain a modest reputation for being unreliable and you will never be asked to do a thing." Not wishing to assume an understanding of the writer's unique brain, it seems possible he was divulging a strategy for idleness. But the quotation is also a warning: do a bad job, and you may never get a second chance. In the fickle world of e-commerce, this idea has never been more important.

Customers are exceptionally disloyal, and poorly considered e-commerce spawns 'web rage'. This is not the irritation you feel when freeing the lawnmower from the clutches of a million spiders, but the gut-howling anger that grips your heart when your painfully completed e-shopping details have been wiped out by thoughtless navigation, or hours of filling trolleys result in Tesco's favourite: 'Your postcode is not covered by our delivery service'.

According to a recent survey of 1,000 people conducted by web site-testing consultancy SciVisum, three-quarters of us now shop online but 78 per cent complained that frustration with web site performance has led them to turn off their computer.

## Web rage

Men are particularly prone to web rage. Only one in five would give a sluggish web site a second chance before turning to a competitor (Figure 1). This is a critical statistic since, in a turnaround of traditional

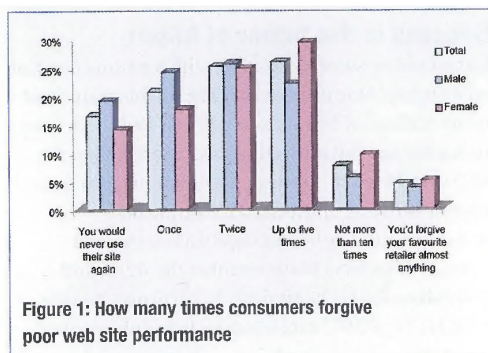


Figure 1: How many times consumers forgive poor web site performance

shopping, twice as many men as women shop online each day and, on average, each person spends £89 per month. A lot of money can be lost when frustrated

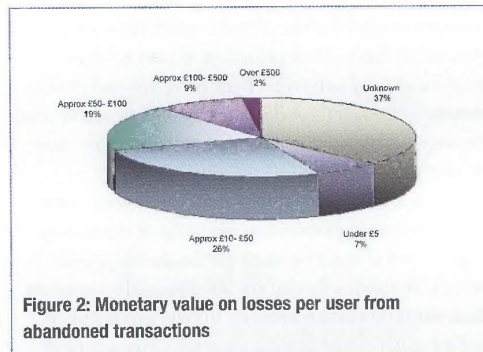


Figure 2: Monetary value on losses per user from abandoned transactions

users quit their transactions (Figure 2).

In a previous study of e-commerce, SciVisum discovered that insufficient technology knowledge is the key factor affecting successful Internet campaign planning. Nearly two-thirds of marketing professionals did not know how many concurrent transactions their web sites could support.

This is akin to a supermarket not knowing if the car park is big enough for the Saturday rush. It is an indictment of online commerce, but is it surprising? Establishing the maximum number of customers that can surf a catalogue or how many concurrent checkouts a server can support is a deeply technical exercise based on bandwidth, time of day and a host of other technical aspects to do with back-end responsiveness, database performance, server loading and network latency. Why would a marketer be interested?

Ben King, director of bit10, a digital solutions agency, says, "By placing the web site development in the hands of either marketing or the IT department, organisations immediately constrain the potential of the online investment. The former will typically task their creative agency to replicate existing marketing copy online. The latter will exploit the latest technical expertise yet fail to represent the real nature of



the organisation. For those companies that have created a joint web steering committee, politics and procrastination typically result in a failure to deliver any innovation or relevance.”

King is scathing of organisations that are unable to view e-commerce strategically: “Far too many organisations are hidebound by internal politics, resulting in a web presence that simply replicates internal structures and fails to meet the needs of the audience. Stepping outside the traditional business model is one of the most important steps to achieving a relevant web site design.”

### Uninformed and overworked

E-commerce sites are unique in requiring so many technical and business skills in close collaboration. Writing text can be done in isolation, but it is better if the writer has an understanding of search engine optimisation and can target relevant terms and phrases. Likewise a marketer’s understanding of data access costs – in terms of network latency and performance – may prevent him asking for features on a whim.

Which is why iterative development processes are best here, since they establish a routine of examining progress and contact between parties as the project unfolds. Without a formal (or semi-formal) routine in place, communication between individuals is one of the first casualties of project overrun. Once a project is in full swing, the time for talking is over and project milestones loom above overworked technicians.

In his popular book *Rapid Development* Steve McConnell says, “Completing small subprojects tends to be easier than completing a single monolithic project. Incremental development practices increase progress visibility by providing finished, operational pieces of a system long before you could make the complete system operational.”

Iterative development relies on running projects one step at a time, testing and reviewing each step before the next step is taken. For most projects – and there are some exceptions in safety-critical applications – it is the best chance you have of making the project goals. Even if an iteration fails, there should be time to re-work.

Nonetheless, things will go wrong, regardless of life cycle, if there are no clear objectives. King explains: “What is the business looking to achieve from a web site? The problem is not just that companies have unrealistic expectations; many have no clear expectations at all. Whether it is basic customer or supplier or partner qualification, or a significant sales increase via e-commerce, every organisation needs to clearly define its expectations up front. And that, for many companies, is the major stumbling block.”

Goals will include: traffic expectations for the

various user routes through the site, sales levels, profits, cost of development, cost of maintenance, project timescales, target availability, target performance, target dropped shopping carts, target visitor count and many other business-specific items.

These expectations impact both technical and marketing concerns. Performance goals may seem simple when a marketer decides a screen must be displayed within 3 seconds 99.9 per cent of the time, but if data comes from a dozen servers via several databases, then technicians must flag up the risk. Business processes may need to change to meet budget constraints, or the budget can be adjusted, but it’s for the business to decide.

But there are other technical concerns that are not the domain of marketers and sales people, and yet can critically affect a company’s reputation. In December 1999, a Russian hacker known as Maxim attacked the CD Universe site, stole more than 300,000 credit card numbers and demanded \$100,000 ransom. Unencrypted card details had been hosted on the same server as the web site. When CD Universe refused to pay, Maxim posted 25,000 numbers on the Internet.

Reported in PCWorld, current CD Universe owner Chuck Beilman said, “They put the candy jar in plain sight and left the cover off. It was only a matter of time until someone stole the candy.”

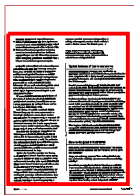
Such an outcome is a serious risk when organisations combine customer data and external network links. Emphasis has been placed on data protection and financial legislation – eg the Data Protection Act and Sarbanes-Oxley – to ensure organisations are handling sensitive data with the required probity.

Combating such scenarios is the job of ongoing risk assessment and has been mentioned many times in this magazine. Is the enterprise prepared for flooding, power cuts, gas depot explosions, disgruntled employees, cyber squatters and DDoS? And, so often more damaging, is the company prepared for unexpected success?

### Success is the father of failure

Instant online success can come with a passing mention on a popular blog or news site. The top bloggers boast many millions of hits each month and an in-link from such a site can instantly attract more traffic than the M25 on a Monday morning. SciVisum suggests three ways of handling unexpected traffic peaks:

- Review your key transactions such as the ‘add to cart’ function. Make sure that the server and database load is minimised. In particular, beware of HTTP ‘POST’ data bloat, include only essential variables and avoid adding or changing cookies and



- sessionIDs during crucial stages of the process.
- Seek out 'database locking' type flaws (eg a limit on concurrent users), which may produce errors at load levels well below the capacity of the server hardware.
  - 'Add to cart' functions may perform well during normal use, but only simulated-user load/stress testing will expose sporadic failures. Even 1 per cent failure during busy periods is 10 times higher than a 99.9 per cent service level agreement requires.

Such traffic peaks are likely to be welcomed by most organisations, but apart from attracting visitors, one factor above all dictates the success of e-commerce: usability. According to SciVisum's survey, usability ranks among the top contenders for causing web rage. Major annoyances include complicated registration processes (47 per cent), not being able to find information (46 per cent), and not being able to amend orders (45 per cent). But the most common cause of web rage, at 54 per cent, is not being able to ask questions by telephone.

Of course, usability is not just about the layout of the web site. It includes how the business processes are defined and interrelate, how swiftly data moves between applications, the quality of the text and the lack of jargon. Much can go wrong.

Jakob Nielsen, of usability consultants Nielsen Norman Group, says the reason e-commerce is so irritating is that humans are not able to function smoothly online. "In every user study, we see people fail again and again at the simplest tasks, such as buying an item at an e-commerce site. It works anyway because humans are very flexible and tolerant. When something doesn't work, we shrug it off and try something else."

He believes that products are being sold and the Web being used, despite the interfaces not because of them. But the 'try something else' reaction is what e-commerce operators want to avoid. The problem is that with pressing technical issues, difficult integration of existing systems, security worries and a host of operational difficulties, usability concerns are usually buried at the bottom of the heap.

That's a pity. According to analyst firm Gartner, in its *Usability and the User Experience* report, paying attention to usability can result in a significant return on investment. According to the report, this is typically 50 per cent to "several hundred per cent," with an extra development cost of between 8 and 10 per cent.

If you would like to "gain a modest reputation for being unreliable", there are plentiful opportunities to underspend, overanalyse and miscommunicate. Every aspect of building and operating an e-commerce site is littered with chances to screw up, but getting it right means treading a narrow path. Luckily, with the

enormous growth in e-commerce, being mediocre is unlikely to draw special attention; it's also unlikely to result in fabulous success. The choice is yours. <

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## Typical features of bad e-commerce

**Lousy performance** Sites overloaded when the US wakes up, assumptions that visitors all possess 8Mb broadband, and advertising that slows a page load or fails to display. Some 78 per cent of online shoppers complained that frustration with web site performance has led them to turn off their computer.

**Dreadful processes** Not giving enough feedback post-order, eg by confirming order details; not organising products into clear categories; not providing enough information on returns, terms and conditions, contact methods etc; wiping customer details if the Back button is pressed; all are symptoms of badly thought out business processes.

**Terrible content** Jargon is endemic on the Web and yet few of your customers will understand it. Surprising research from Nielsen/NetRatings reveals that 40 per cent of surfers in the UK receive news feeds, but 67 per cent did not know this was called Really Simple Syndication (RSS). Although 35 per cent recognised the term podcasting, they didn't know what it meant and a quarter had never heard of it. And 34 per cent said they had heard of blogging but were unsure of its meaning. Using jargon is a symptom of not understanding your target audience. "Never assume potential visitors know about your products, textual/photographic information/related products," says Simon Ferris at f5Media.

**Other bugbears** Robin Daniels, senior product manager of content management enterprise Vignette EMEA, says bad e-commerce "often comes down to confusing layout, hard-to-find information, and over reliance on new flashy technology that serves no purpose."

## How to do good e-commerce

Robin Daniels, senior product manager, Vignette EMEA: "The essential things are: easy site navigation, clear communication, powerful search and consistency."

Amaze, web-technology company: "There are five points that make up a good website: simplicity; responsiveness; resilience; availability; reliability."

Simon Ferris, managing director, f5Media: "Speak to your customers in your own voice and don't pretend to be something you are not. Be approachable and don't be afraid to encourage comment and feedback. Use a newsletter – they are invaluable for targeting and keeping your site in the minds of your loyal customers. Make your web site as customer-focused as possible. Ensure everything is laid out in a logical, consistent way. Form follows function, and web design should reflect this."