Originally those businesses that thought to embrace the advanced technology of the Web were visionaries that could see its potential. Here was a channel to enter previously untouchable new markets, to access a vast and ever-growing customer and client base all over the world, 24 hours a day, seven days a week. Today, some ten years down the line, the Internet is rapidly becoming an integral part of business across the globe. There are currently approximately 250 million individuals worldwide with access to the Net, and this number is expected to grow exponentially into the future. There is, of course, a downside. The risks of rushing into business change are many and complex, and this article attempts to explore these further.

E-continuity: How to Survive if you Rely on the Internet

Stewart Roby
KPMG

THE PRESSURE on a company to embrace the e-world is immense, from competitors and customers alike. Customer demands and expectations now act as one of the main drivers for business change. Likewise, in business-to-business cases, companies are looking to partner operations with which they can streamline their dealings, cutting down on paperwork and administration overheads and automating the supply chain. This is only fully possible on the Internet. Other drivers include: the rapid and continued advancement of Web technology; the business potential of the new markets and vast customer and client pool to which the Internet provides access; the undeniable cost savings of an automated online business; the high valuation of Internet stocks and fear of missing the boat. All these factors, and many others, are driving companies to dive headlong into e-business. This is not a business trend; this has provoked a movement large enough to be dubbed the new economy.

Side effects

Speed is becoming increasingly important in the information age. Now that we can transact at the speed of thought, we can make business faster and we can change business faster. The length of time between the conception of a Web strategy or a startup company, for example, and its implementation, has become shorter and shorter. Today's winning idea is tomorrow's loser. This is true for products as well as website technologies, as time to market rapidly shrinks.

The most common result of a rapid move to e-commerce is a weak infrastructure. This is the Achilles heel of an Internet company, as, by its nature, it will be increasingly or wholly dependent on technology. Over the last ten years, more and more money has been invested in IT, in the form of ERP implementations for supply chain automation, data warehousing products, Y2K or EMU programmes and customer relationship management systems, all with decreasing return on investment. In many instances, where a company that starts out on the Internet is successful, it will soon outgrow its IT capability. If this is not dealt with quickly, a costly restructuring process may be necessary, which can mean a loss-making outage, which can, in turn, lead to customer loss and a drop in shareholder value. The worst case scenario, however, is where a company's infrastructure cannot deal with the sheer volumes of traffic through the Web, or data through its system, and crashes. There have a been a number of high profile outages with disastrous results over the last decade, the most spectacular of which was that of E-Bay, the online auction company. In the summer of 1999, the company planned a small outage for a system upgrade. The upgrade went wrong, and thus followed a 22-hour outage, which caused a loss of $6 billion from the company's market capitalisation. E-Bay's share price dropped by 40% that summer. The current trend of overvaluation of Internet stock and many high-profile success stories means that any outage or failure is guaranteed to be even higher-profile, and very costly indeed. In the new economy, technology underpins the revenue stream and way of doing

business; any failure has an immediate and direct impact. In the words of John Pleasants, President of Ticketmaster.com: "We can't afford to have a glitch. We would lose consumer confidence. We would lose market share."

From this we can see that an Internet company, while having the world at its fingertips, also has a lot to lose. The cost of failure stands very high, with brand and reputation at the top (which, for many companies, is their biggest asset) but followed directly by, and indeed intrinsically linked to:

- Customer loyalty – the customer has become empowered by the vast range of alternatives that the Internet offers, and as such is now becoming fickle. This places customer loyalty, or 'stickability', at a premium.
- Market share – the key to holding market share can lie in a consistent and reliable system performance in such a highly competitive environment.
- Shareholder value and market capital – which can be affected significantly by any of the above.

All these factors are at best volatile in the new market, and no company can afford not to tackle these issues.

The Real Challenge

'Availability, availability, performance'. These were revealed as the three top priorities for an e-business at a recent e-commerce seminar. Perhaps not the catchiest quote of all time, nonetheless it perfectly sums up the issues to be addressed. Thanks to the Internet's intrinsically global nature, the business market is now open 24 hours a day, seven days a week. Customers, clients and business partners alike expect a level of availability called the 'five nines': 99.999%. This is a steep demand, but not meeting it could result in the types of losses captured above. The third priority, performance, is related, but refers more specifically to the quality of a website and its functions. A website may be available 24 hours a day, but if it takes ten minutes to download a page, the customer is lost anyway. Performance also covers the richness of a website's contents, and the quality of service the customer or business partner receives, not just the performance of the systems. A company must ensure that its systems can not only deal with a sharp increase in usage in the short term, but also looking forward. This is particularly true for a new startup company, which is likely to sustain high growth in its early years.

Those formative years of an e-business are likely to see a variety of system modifications, as a business adapts to e-commerce, and continues to learn and change. To be reliable, an infrastructure must be able to accept changes and modifications with minimum disturbance to the existing processes. With ever decreasing time to market, a company now needs the ability to turn over new products at record speeds A reliable infrastructure is scalable, to which new technologies can be introduced easily, and in which glitches and unplanned downtime are minimised.

In a recent 'double blind' survey in the USA which asked 500 chief executives what their key Internet challenges were, the results were:

- security
- disaster recovery
- 24/7
- capacity planning.

Security is the issue that concerns not just company executives the most, but also customers and clients, to the extent that it can prevent a purchase or a business transaction. The majority of customers worry about the safety of entering their details on the Net, for two main reasons. One is a privacy matter: Who has access to their private details, and how will they be used? The other concern is fraud; the worry that credit card or bank account details will be stolen and used fraudulently. Although many advances have been made in the development of encryption techniques, securIDs and digital signatures which all act as protective devices, the code breaking technology is only a step behind the code making technology, and 'hacker's packs' are widely available on the Web for novice users. Companies need to invest wisely in security measures around every link in their IT chain.

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Again, these four areas can be covered by the umbrella term of 'availability'. If a hacker causes a website failure, as occurred in February this year, over a three day period of hacker mayhem in which Yahoo, Amazon, E*Trade, CNN and other high-profile sites were brought down, this is an availability issue. True, traditional disaster recovery tools such as pre-written press releases and executive call-out trees were most likely invoked in the event, but once a site is down, the damage has been done, however short the recovery period. Revenues are lost every second. The need for 24×7×365 availability at 99.999% performance levels almost renders disaster recovery redundant. It is the last resort for an e-commerce company.

Business Continuity in the Information Age

Planning for all the eventualities described above should be top of every Internet company CEO's list. This means bringing business conti-

nuity upstream, and ensuring that an outage is avoided at all costs, by embracing the issue of constant availability. Those who recognise this will gain a significant advantage. A comprehensive and structured programme will improve not only the availability of the systems, but also that of the processes and the people within the company. Additionally, and perhaps more importantly, it will assess the availability of a company's suppliers and buyers. A weak link in the electronic supply chain can be just as damaging to a company as one within its own walls, and is easier to overlook. As a result, risk can be identified and reduced, and new controls and management methods introduced if necessary. A programme of this kind, for example, may address the following processes, in order of importance: Enterprise High Availability, Service Level Management and Business Continuity Planning.

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Enterprise High Availability

The goal is to achieve and maintain the chosen availability level (99.999%) in an enterprise's IT infrastructure. A review of various areas of IT, such as data storage, network, platform and hardware, applications and software, and facilities should reveal any weak links in the chain that need to be addressed. These areas should be controlled and managed closely, along with matters like remote site integration and alignment of IT with business strategy if applicable. Equally important is to certify that ISPs, ASPs and the supply chain can provide an enterprise with the right level of availability. All this should help to build high availability into business systems from day one rather than implementing expensive fixes, and will ultimately reduce the cost of downtime, protecting revenue stream, brand and shareholder value. With the right technology infrastructure, you can reduce the rapidly increasing cost of information management and your systems will have the capability to deliver the required 99.999% availability for true 24/7 trading.

Service Level Management

Even with the correct technology infrastructure, it is still necessary to ensure robust IT management practices. More downtime occurs through people or process error than through technology failure. By managing and controlling the IT infrastructure effectively, the overall operational reliability will improve. It is in this area that a business will see the most immediate time and cost savings, extending the useful life of existing systems and facilitating any modifications and the introduction of new technologies. These steps will enable a business to measure the efficiency of its systems, and the level of service that they can deliver. With these results, critical areas of IT and its management practices are brought to light, and can be focused on for improvement. This framework of key measures can also be applied along the supply chain, enabling enterprise to remove glitches in the entire business life cycle. Alongside this, a thorough quality assurance review would be highly advisable, so a business may offer its partners a guarantee of performance level.

By managing and controlling *the IT infrastructure effectively, the overall operational reliability will improve*

Business Continuity Planning

This is the traditional method of planning for business continuity in all circumstances, or more specifically, to minimise downtime of key processes in the event of a major disruption. It is sometimes referred to as disaster recovery, but this only plays a small part in the overall planning process. As I mentioned earlier, BCP is the last resort and effective controls and reviews of the nature described above will greatly reduce the potential risk to a company, providing an environment that enables much faster recoverability. As a result, any further risk reduction work as part of a BCP exercise will be less time consuming. Once the risks are assessed, action can be taken to minimise these, or to mitigate them in case of disaster. An emergency response plan is also a requirement, and employee training is imperative to avoid further disruption and confusion in the event of failure. BCP plans need to be regularly tested and updated, particularly following any change to the business process, structure, IT, or staffing. In many industries, it is a regulatory requirement to implement BCP. There are, however, other benefits such as the protection of an enterprise's brand image and reputation, the provision of effective corporate governance, the

growth of market share and shareholder value and the retention of customer and supplier confidence and loyalty.

Summary

The process described above is one method of mitigating the risks faced by Internet companies or any business entering into e-commerce activities. But all this can be summed up in one word – availability. To survive on the net, ensure 24/7, 99.999% availability of your systems, processes and supply chain. Done wisely, this will allow you to concentrate on expanding your business, rather than supporting its infrastructure. Grasp the issue early on and you can reap the benefits with an assured business continuance environment, reduce time to market for new services and reduce the costs of information management.

Biography

Stewart Roby is the Business Continuity Management service leader for KPMG in the UK. As a Fellow of the Business Continuity Institute, Stewart has established himself as a leader in the field of business continuity. Mr Roby has performed BCM reviews on a wide range of business-critical processes including satellite control operations, production line management, oil and gas production and international investment banking. He has extensive experience in the areas of business continuity and risk management. Stewart has promoted business continuity management by speaking at seminars internationally and has performed numerous reviews in most business sectors worldwide. ■

Contact

Contact:	**Stewart Roby**
Company:	**KPMG**
Address:	**7th Floor, 1 Canada Square** **Canary Wharf** **London** **E14 5AG** **UK**
Tel:	**+44 (0)20 7311 5174**
Fax:	**+44 (0)20 7311 5836**
E-mail:	**stewart.roby@kpmg.co.uk**
Website:	**www.kpmg.co.uk/kpmg/uk/services/audit/risk/avail/avail.htm**