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## Metrics

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## Website metrics

### – what are they and why do business owners and marketers need them?

by Peter Schouwenaars

Business strategy, in almost all industries, needs to make use of website metrics. That consumers can find information about your products or services increasingly easily on the web been a truism for years, as the so-called “internet age” has endured. What, then, do strategists, marketers, sales staff – in fact, everyone involved in making your business a success, need to understand to maximise consumer satisfaction?

The answer begins with an understanding of how consumers use the web and what impact this can make on your brand. It ends with an understanding of the breadth of information that can be gleaned, and a careful narrowing of these options so that they apply to and serve your business objectives. There are different types of analytics, different sorts of metrics, measuring different characteristics of your website. Establishing an integrated view and selecting the tools to empower your staff and not drown them in data that is the “holy grail” of metrics.

First of all, how do consumers, prospects, competitors and the press interact with your brand on the web, and how does this guide marketing and business development professionals wanting useful metrics? Visits to your website are part of a patchwork of touch points that cover on and offline brand discovery. Offline, customers may browse in store before buying online after using the web to make price comparisons, or they may compare and browse online before making the trip to a physical retail outlet. Attitudes to completing transactions online differ within consumer groups, between age groups and depending on the product in question. This is the first reason why the engagement of metrics needs to be precisely fitted to your business objectives. If your customers prefer to buy in the retail store, your website probably ought to be geared (in usability, navigation, etc) towards an outcome other than a transaction – perhaps to completing an enquiry form, or simply to finding the right page (and staying on it for the appropriate amount of time to read) after few clicks (if that indicates ease of navigation in your context). Similar for a service company – you might be aiming at keeping the browsing party on your site for an appropriate amount of time to get them familiar with your services – but how many seconds browsing indicate interest, and how many confusion? Perhaps your website’s main goal is support – in which case your chosen outcome might be the swift location of a phone number for your customer. The goals are

precise, personal and specific. The behaviours that match these goals are unlikely to be transparently clear initially – less still the aspects of your site that make these behaviours happen. Website analysis tools can produce detailed, unwieldy, suffocating amounts of data, each type dealing with a different element. Ensuring that you receive the relevant information and find actionable insights for your board, marketing team or webmaster is key.

Most people’s introduction to tracking of website-related data comes via a pure analytics tool that reports on website visitors, sources, crude source geographies and some behavioural trends like page abandonment. These tools, (from Google Analytics, Webtrends, Coremetrics), are the fundamentals of starting to understand how interactions with your online presence happen. What they don’t provide, however, is detailed performance-related insight. When a user abandons a site, is the reason something to do with visuals or usability, or does an object not render? Perhaps the button that would allow them to progress towards their goal falls below the fold on a certain browser/OS combination? These are site performance issues – the very things that performance monitoring tools pick up.

A holistic view of your web presence will encompass detailed performances metrics that, after devouring data, spit out a clear indication of precisely why your site goes wrong, slows down or otherwise fails to satisfy the end-user. This is part of an overall suite of proactive working practices - analysing your email marketing success or failure, assessing sources of traffic critically, linking online insights to offline behaviour, and consistently reviewing the goals that you’ve set for online activity, around which the usefulness of your metrics cling. To compete online, and tap into the latent knowledge waiting for the savvy business owner, it’s clear that usage of some sort of metric is compelling. Why, then, do we select performance monitoring to focus on in this article? The answer is that its importance as part of this holistic view cannot be underestimated. Rocketing consumer expectations compel us to ensure high performance. Research shows that 40% of consumers will wait no more than three seconds for a web page to load before abandoning the site. That’s a striking statistic – and one that sets a high bar for the performance of any website. Once we take this basic assumption on the part of consumers, and start contemplating whether we hit the mark considering

the variety of locations from which consumers access the site, the variety of hardware, the speeds of internet access, even the browser that they select from the increasing plethora...it suddenly becomes clear that a credible web presence is about far more than a website that looks great from where you're sitting right now. It's complicated – particularly because most of the nasty third party influences that detriment website speed lie in the space between your firewall and the customer. And that's before we start looking at mobile browsers, handsets, locations and networks. It's clear, if companies don't incorporate performance monitoring, customers will vote with their feet.

Our assumption throughout is this: websites and e-commerce applications are the engine rooms of modern business. Their importance, as part of a cross-channel tapestry, cannot be understated. Web applications that underpin operations, sales or simply operate as the facade of a business, its window on the world, directly or indirectly generate revenue. Badly performing websites damage the image of the company, may gobble resource as the call centre is flooded with complaints and effectively "slams the door" on the potential customer. So how do we stay within the magic three seconds website response rate, and blunt the potential damaging impact of third party issues on our website?

Sometimes simple tweaks to code infrastructure are all that's required, responding to events elsewhere in the website "food chain" that affect performance or fixing underlying fragilities in the website's architecture. Most in the market rely on an analytics tool, on the one hand, to give information consumer behaviour and expect details about website performance from the server side. This approach leaves some massive gaps in the knowledge gathered about the application. Knowing the steps taken by a user moving across a website sheds no light on how it was perceived by him. Investigating on the server-side the speed that the traffic is handled doesn't complete the picture either; as it doesn't tell the user how long it took to reach the server, or indeed whether the server was reached at all.

Brand and website owners need hard metrics about performance and user experience to improve their offerings - this is the data upon which decisions and corrections should be based, and helps improve repeatability of tests and test results. Software as a service solution that provide on-demand metrics and analytics for web applications, focused strongly on performance, are burgeoning in popularity.

Monitoring performance as well as functionality, from a user point of view, is best carried out when the tester is able to select equipment and geographical locations and check performance and functionality from this setup.

That ability to monitor performance and site availability from a dizzying array of geographies is highly valuable, allied with powerful, automated tools checking for faults in rendering across browsers, operating systems, screen resolution combinations and mobile devices. Accessing complex matrix of compatibility testing is also key as website performance and look is distinctly affected by the large and increasing number of potential combinations of hardware and software. Browser variation in particular is proliferating since IE stopped being bundled as the default browser with new Windows products and a "decision screen" put in place. As well as not loading in time, not loading correctly "slams the door" on the user – and if the "buy" button on a transactional website fails to render or is not immediately accessible

without scrolling on a certain browser, then your conversion odds lengthen, with a clear potential impact on the bottom line.

Historic performance monitoring and metrics have been somewhat rudimentary: measuring how long it takes to connect to the server or download the content. Looking at these items critically – encompassing offsite redirects, root pages and the breakdown of each object on a page. The Holy Grail is identifying, moving or fixing the pesky item (the page object) that isn't rendering – or shift the all-important call-to-action button to ensure that it's above the fold. This is part of testing the complete user route, not the server side or analytics in isolation. Next to evaluating the elements that the user controls, the best tools also provide the necessary detail about the various pieces of third party content that impact on your application. Object tracking allows the collection of hard metrics on the content provided by, say, ad-servers or sub-contracted elements of your application. This gives SLA peace of mind – as well as ensuring that you're upholding your commitments, there is a tool to verify that your partners are doing the same. Further, this tool offers the option of draw metric from real user visits as well as user behaviour deliberately generated for testing. Based on actual user visits, the tool draws information about the performance of the page. How fast did it load? Which elements hampered speed? What elements were loaded and visible at the point the user abandoned the site? Where fully automated user scripts can be set up to generate metrics concerning user traffic and other elements, completely controlled and giving you comparable and highly reliable measurements, then complete oversight is being approached. The combined results from those two approaches offer a unique insight in the performance of the application and the related user reaction.

Getting your own "house in order" via URL monitoring, transaction monitors and real-time tests, but more sustainable business improvement can be gleaned from mining the competitive intelligence that can be gleaned from the web. With server side monitoring and traditional analytics tools, it was not possible to glean hard data on how competitor sites performed. The "user route" approach of the new tools changes this as you interact with the site as if a member of the public. By simply setting up the benchmark monitoring facility, you can assess your site's performance compared to direct peers, and establish what weaknesses can be exploited in the competitor's offering. Just like "mystery shopping" by real-world retailers, sending moles into shops and identifying the good, the bad and the ugly of the store layout and associated customer experience, web monitoring can investigate the behaviour of your competitor's online store and allow you to refine, learn, glean and clinch that all-important sale. Website performance also affects search rank – again clear proof that tools and consequent tweaks of all types are part of a patchwork of active augmentations that bolster your online presence.

Acting on the findings of the metrics is key – today's performance monitoring tools can be set such that alerts are tuned to recognise availability failures. When these sound, they allow IT functions in businesses to identify and resolve issues before they impact the end-user. Developers and QA teams can use automated metrics and testing tools to minimise testing time and costs, particularly in regression rounds, whilst enjoying the confidence that the live phase of the web app's lifecycle will be fuss-free, with the produced item functioning as intended across all system combinations. The tool behind this cost-effective service and simple user interface is in fact a veritable powerhouse. Utilising the biggest and broadest performance network, the underlying principle is giving

the user confidence that they can monitor how the site appears to customers, wherever in the world those customers choose to access it.

On-demand tools of any kind should allow precise control over exactly the elements of website performance that matter to your business, allowing you to achieve delineated goals - whether those goals are increasing website "availability" percentages, encouraging longer stays on the site or driving customers to transaction completion. "Information overload" is a genuine concern - excessive exposure to metric data can paralyze marketers. These incredibly powerful tools put all this at your fingertips, but the right professional services are required to support the user in processing and analysing it effectively. That's where QA consultants come in - you might not have, and might not want, to dedicate resource to understanding the information and turning it into the actionable insights that will improve your bottom line. But without this analytical effort, the investment in metrics is wasted and an unintelligible string of data may be the output. So, which data do you need, and how do you access it?

Frankly, monitoring and metrics serve as safety nets for disaster as well as necessary informants of reflective, strategic thinking. Once you've set your baselines and defined what events will spark off monitoring "alarms", it's the lot of the company to decide how to respond to these alerts. Upon finding a site event that's defined as „at risk“ or „critical“, depending on your defined parameters, a status report digs more deeply into the source and symptoms to allow rapid response. These alerts might be triggered by response time failures, content matches, transaction failures, page object alerts, page inaccessibility and server unreachability. When the "siren" goes off, you can react before many of your customers do. The importance of this agility is paramount where the website is customer-facing in any way, transactional or informative. A bad website experience might be the first impression that your customer gets of your brand - or it might be the last as the savvy consumer votes with their mouse and visits a rival instead.



## Biography

Peter Schouwenaars, software testing expert at Testronic Labs, has over a decade of experience providing independent testing services for consumer-oriented multimedia applications, websites and software. With years of experience managing accounts for international clients that span the entire European publishing market segment in education, websites, games and film, Peter is a source of excellent insight into QA processes of all kinds.

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