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Competing on web analytics

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Abstract

In 2006, Tom Davenport published *Competing on Analytics* in the Harvard Business Review. This paper served as a wake-up call for businesses that had made significant investments in data-processing technology but had not appreciated commensurate returns. This paper outlines how Davenport's work can be applied to the online channel, providing business an entry-point into the complex process of transforming a company's ability to compete on analytics. *Journal of Direct, Data and Digital Marketing Practice* (2009) **10**, 214–222. doi:10.1057/dddmp.2008.38

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Introduction

In 2006, Tom Davenport got the attention of the entire business community by suggesting in the Harvard Business Review (HBR) that companies could create a sustainable and strategic competitive advantage by investing in analytics. His paper *Competing on Analytics* was of 12 short pages that resonated in a way that few expected. The key ideas were relatively simple:

- Competing on analytics depends on operational interpretation and visualisation of data, not data collection and reporting.
- Analytics needs to be managed globally for all processes and functions, not departmentally or in silos.
- Being an analytical competitor requires continual monitoring and response based on observed changes, not episodic changes and re-engineering.
- Success depends as much on people and process as on technology

Each of these four points was controversial in its own way, especially as companies around the world have invested significantly in the status quo, but Davenport's work resonated loudly with managers and marketers around the world, propelling the idea of becoming an 'analytical competitor' into the modern business lexicon.

Unfortunately, despite the tremendous case Tom and Jeannie Harris made in their full-length follow-up to the HBR paper published in 2007, many companies have discovered that transforming the business from the status quo to a full-blown analytics competitor has proven difficult at best. The challenge is that most organisations' analytics,

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business intelligence and market research strategies are firmly established, and thus, driving the necessary changes may be akin to turning the proverbial battleship.

Still, the desire to replicate the successes of Harrah's, Google and Amazon dot com is intense, and many companies have started looking for opportunities to start implementing Davenport's key principles, at least on a microscopic scale. Fortunately, most marketing organisations have made some type of investment in measuring their online channel, often implementing technology from companies such as WebTrends, Coremetrics or Omniture, and this investment provides the perfect opportunity to test Davenport's recommendations in an environment where few companies have resourced at the same level as their expenditure on business and marketing intelligence efforts.

Competing on web analytics

In *Competing on Analytics*, Davenport defined 'analytics' as 'the extensive use of data, statistical and quantitative analysis, explanatory and predictive models and fact-based management to drive decisions and actions.' Web analytics can, for all intents and purposes, be thought of as 'analytics' younger sibling, requiring the extensive use of online data, quantitative analysis, multivariate testing and fact-based management to drive decisions and actions.

Being successful with web analytics requires adherence to the same key ideas cited above — an enterprise-wide focus on analysis driving continual improvements powered by the combination of people, process and technology. Similarly, the goal of web analytics is the optimisation of business performance and increased competitiveness in the open market online.

Because most companies have a relatively nascent investment in web analytics, the opportunity is twofold. First, by learning to compete on web analytics, companies can explore the internal roadblocks to becoming a more data-focused organisation as a whole. Secondly, most companies have dramatically under-invested in their web analytics efforts, and fail to appreciate anywhere near the benefits widely ascribed to the practice, especially as described by the technology vendors.

Why is this? Simply put, because web analytics is hard. Like any complex business practice with dependencies throughout the organisation, web analytics has countless potential points of failure. Failure to code properly, failure to validate incoming data, failure to communicate expectations regarding the necessary reports, failure to staff adequately for analysis capabilities, failure to define key business and knowledge processes ... this list is seemingly endless in any organisation of size.

Although the idea that 'enterprise data collection and analysis' is difficult seems laughable and hardly worth bringing up, the relative youth and inexperience of many in the digital measurement industry has resulted in many proclaiming that 'web analytics is easy', and thus expectations have been improperly set. Any number of business

**Analytics is the same,
online and off**

Web analytics is hard

managers have unfortunately bought into the ‘easy’ notion, and have mistakenly communicated to management that ‘the insights are on their way!’

Sadly, those insights are rare even in the best of situations, and much more so when too little attention has been paid to the overall process of competing on web analytics and the need for a clear plan, solid resources and an appropriate technology implementation.

Develop your roadmap

Recently, E-consultancy reported that fewer than one in five companies have a company-wide strategy for web analytics (www.e-consultancy.com/publications/online-measurement-and-strategy-report-2008/). Although somewhat discouraging, these numbers are a slight improvement over a similar assessment provided by Web Analytics Demystified in May 2007, where only seven per cent of companies worldwide were reported to have a process-driven approach (www.webanalyticsdemystified.com/sample/Web_Analytics_Demystified_-_The_Web_Analytics_Business_Process.pdf).

According to the Web Analytics Association 2008 Outlook survey (www.webanalyticsassociation.org), the top three hurdles reported by web analytics end-users were getting the organisation to make business decisions using the available data, getting executive involvement and staffing appropriately for analytics success. These responses are somewhat ironic given that the seventh response, ‘Developing and implementing process’, is the solution to all of the previous six hurdles, provided the organisation recognises the need for a strategic roadmap to guide the use of web analytics within the organisation (Figure 1).

Given the difficulties most companies face when attempting to leverage digital measurement technology, not having a clear roadmap guiding implementation and organisational use is akin to a professional football coach trying to run a team without a playbook. Businesses working to be more competitive online can no more ‘wing it’ than the

A strategic approach towards web analytics is largely lacking

Adoption of business process is the primary hurdle

Figure 1: Primary hurdles faced by organisations implementing and using web analytics solutions, as reported by the Web Analytics Association (www.webanalyticsassociation.org)

late Vince Lombardi, one of the most effective coaches ever in American Football, could have during the Green Bay Packer's 1962 campaign; Lombardi's playbook governed all aspects of competing on the gridiron, much as business owners need to have a governing plan for competing on web analytics.

Companies need to develop a web analytics roadmap that clearly describes the following to the organisation:

- How the use of web data will be leveraged on an operational basis?
- How web analytics will be supported internally?
- How the output from web analytics will serve as an input into other organisational processes?
- How the organisation will know they are being successful in their attempts to compete on web analytics?

Coach Lombardi is famous for saying 'Winning is not a sometime thing, it's an all the time thing'. The same is true for competing in the digital realm: it is not enough to try and compete once in a while. To compete on web analytics, companies need to have a clear strategy that they execute against all the time.

Manage your talent

Unsurprisingly, competing on web analytics is resource-intensive, especially given the near complete lack of real analytical functionality found in market-leading technology such as Omniture SiteCatalyst, WebTrends and Coremetrics. To be truly successful, most companies rely on centralised analytics organisations to manage critical processes. Key among these processes is driving awareness of analytics throughout the organisation.

Executives, while certainly not requiring direct access to web analytic systems, must develop a strong understanding of the available data, and a dependence on the few critical reports governing their line of business. The primary data-delivery vehicle for senior executives is key performance indicator reports, and these reports should be designed to drive requests for analysis. The challenge for most organisations then becomes having resources capable of producing analysis against data from the digital channel.

Analytical professionals with deep experience with web data are unfortunately difficult to come by in 2008. At any given time, there are thousands of companies searching, and a much smaller number of qualified, experienced individuals looking to change jobs. This situation is aggravated by the fact that most experienced practitioners are 'home grown' and have little formal background in quantitative sciences, marketing or business systems. Still, these positions are being filled, largely by the same type of individual first described by JupiterResearch in 2004 in the report *Web Analytics: Staffing, Spending, and Vendor Selection* (www.jupiterresearch.com/bin/item.pl/research:vision/79/id=95735).

Organisational awareness is the key

Availability of digital analytics professionals is a key bottleneck

**A centralised/
decentralised
approach is
recommended**

Analytics amateurs — those people in your organisation who have a partial dependency on web-based data to do their job — are critical to being able to compete on web analytics. Business users need to take enough interest in competing on web analytics to spend the necessary time to understand what is essentially arcane and somewhat nuanced data. Unsurprisingly, this is where the web analytics process usually breaks down in organisations, regardless of size.

To combat organisational entropy away from the competitive use of digital data, Web Analytics Demystified has long recommended a centralised/decentralised approach, something we refer to as the ‘hub and spoke’ model for web analytics. The hub and spoke model requires the creation of a centralised team (the hub) responsible for core web analytics functions including data collection, data vetting, analysis and providing organisation-wide education about the systems and data. This central team is then tasked with supporting the distributed organisation of analytics amateurs (‘the spokes’), while both drive the process of competing on web analytics (Figure 2).

More about the hub and spoke model for web analytics and analytics teams can be found in two blog posts by the author from February 2008: <http://blog.webanalyticsdemystified.com/weblog/2008/02/what-is-your-web-analytics-communication-strategy.html> and <http://blog.webanalyticsdemystified.com/weblog/2008/02/what-is-your-web-analytics-communication-strategy-part-ii.html>.

Architect your technology

**Too great a reliance
on technology**

Strong technology is an absolute requirement for competing on analytics, especially given the tremendous volume of data generated through even the smallest web property, and even more so the sites and applications supporting the true Enterprise. The problem is that many companies in the digital sector have developed too great a dependence on their technology, as if technology alone was able to provide insights and answer questions in the context of the business. Competing on web analytics requires equal proportions of people,

Figure 2: ‘Hub and Spoke’ model for web analytics team deployment within the organisation, as first described by Web Analytics Demystified in 2006

No one vendor provides all the answers

process and technology, and the absence of any one of the three effectively removes any competitive advantage the business would have in the online channel.

Unfortunately, no one vendor today provides the entire suite of necessary technology, and thus business intelligence and information technology leaders are forced to rely on a still-consolidating market to deploy the data collection, reporting and analysis tools required to compete on web analytics. Today this suite includes the following:

- Simple presentation tools, including the ability to report directly to other enterprise-deployed applications such as Microsoft Excel.
- Powerful data manipulation, visualisation and segmentation tools.
- Rich analytical modeling capabilities for predictive analytics and forecasting.
- Robust tools to extract, transform and load data from multiple systems.
- Flexible and fast data repositories capable of handling tremendous data volumes.

Companies need to integrate quantitative and qualitative data

For most companies, the first step in moving from ‘generating reports’ to ‘producing analysis’ is the integration of quantitative and qualitative data from the online channel, followed by the use of this combined data set to drive experimentation and testing. To this end, there is an emerging notion of an ‘ecosystem’ of digital data where each system accepts inputs and produces outputs appropriate for the other (Figure 3).

More information about this ecosystem of data is available in a White Paper published by ForeSee Results (www.foreseeresults.com/Form_Epeterson_WebAnalytics.html).

Figure 3: The Website Optimization Ecosystem, highlighting the relationship between web analytics, customer experience management and Voice-of-Customer applications

The opportunity to improve competitiveness is clear

Focus on people preferentially over technology while getting started

Backcountry.com competes on web analytics

Putting it all together

Given a reasonable roadmap, appropriate resources and sufficiently strong technology, there is nothing stopping a company from competing on web analytics. Again, given that most companies still dramatically under-utilise their investment in taking measurement from the digital channel, attempting to transform most web analytics initiatives as a model for competing on analytics more broadly provides a significant opportunity for learning, with few disadvantages.

One point worth making: the principles outlined in this paper apply equally to companies large and small. And while a global enterprise will inevitably require more resources, more expensive technology and a greater investment overall to be competitive, any small- or mid-sized business can leverage the combination of people, process and technology to dramatically improve their ability to compete in the online channel.

In terms of expenses, there are unfortunately no hard and fast guidelines to govern how companies should budget for web analytics. Some companies competing on web analytics today are spending millions annually on people, process and technology; others are spending substantially less. The best guidance possible is to minimise technology expenses in favour of staff until those resources have demonstrated competence on available systems and a significant need for more robust tools. The tools are becoming increasingly commoditised, whereas the human resources required persist in being unfortunately rare.

Case in point

In 2001, Backcountry.com was a tiny start-up founded in Heber City, Utah, with one goal — to compete with the likes of leading retailer Recreational Equipment Incorporated (REI) in the ultra-competitive outdoor gear market. Backcountry.com knew they would never be able to out-market or out-spend Seattle-based REI, but they suspected that by leveraging web analytics and being aggressive in the digital channel they could beat REI online.

It turns out they were right. While not replacing REI, Backcountry.com was able to grow from a handful of hardcore ski bums in Heber City to a company with over 300 employees and hundreds of millions of dollars in annual revenue. Recently acquired by Liberty Media, Backcountry.com now expects to add nearly 1,300 new employees to the organisation and grow the company nearly 500 per cent over the next 5 years. The company started with one person working on analytics half time and now has a full team of analysts and a company-wide commitment to data-driven decision making.

Regardless of size, most companies' commitment to the digital channel is only going to grow, further emphasising the need to move organisations' analytical needle beyond 'reporting for reporting's sake' to 'analytics for competition's sake'. Those companies that adopt the principles outlined in Mr. Davenport's book and abstracted here for application to the digital channel are much more likely to succeed than those that do not.

Competing on web analytics: How to get started

Assuming that the internet will continue to be an important and increasingly profitable component of your business, the steps you need to take to begin competing on web analytics today are as follows:

1. *Develop your web analytics roadmap.* Take the time to determine how well you are using web analytics today, and figure out what it will take to fill the gaps. This step can be greatly facilitated by external consultants experienced in developing digital measurement strategies, but can also be carried out organically with the resources you have in place already. Make sure to explore people-, process- and technology-related issues, and perform a gap analysis against each. Remember, the goal is a document that describes how your organisation will develop the necessary competencies to better compete in the digital realm, not how to get more reports.
2. *Prioritise your needs against your roadmap.* Most companies, when they are willing to take an objective look at where they are and where they need to be, come up with a fairly substantial list of needs. But you cannot boil the ocean, and so you will need to prioritise those needs against the likelihood of generating early returns. These early returns can then be leveraged to generate additional internal support for web analytics projects.
In general, the investment in allocation of resources produces a greater return than the investment in technology, especially when coupled with adherence to business process. When prioritising, look for opportunities to give your smart people more time to analyse data and make recommendations, at least initially.
3. *Increase staffing levels to promote the shift from 'reporting' to 'analysis'.* The single most common failing among companies deploying web analytics (and analytics in general) is to spend too much time generating reports and too little time producing analysis and recommendations, but almost universally, executives express the desire for clear analysis and recommendations, not more data. The solution to this problem is appropriate staffing: giving bright people the time, the opportunity and the mandate to look beyond reporting raw data and taking the time to drill-down into the real business opportunity.
4. *Deploy technology to fill gaps in your understanding of the digital visitor.* For most companies, this means looking at Voice-of-Customer and Customer Experience Management solutions in an attempt to create an integrated view of the visitor, at least in the short term. In the long term, you need to be considering some type of A/B or multivariate testing technology that will let you simultaneously incorporate the recommendations your analytics staff are making *and* effectively determine the incremental value those recommendations provide.
5. *Iterate and improve.* Any organisation's ability to compete on web analytics over time will depend on its willingness to continually

revisit its roadmap, its staffing and its use of technology, looking for opportunities to improve. Remember, web analytics is hard, but it can be made to seem easier when the goals are clear, the resources are assigned, support is forthcoming and the business is willing to continually invest in the idea of process excellence.

A lot of work to be sure, but for most companies the alternative is to continue to pour money into digital investments without a clear picture of how those investments perform and without a clear strategy for how to fix what is not working.

Towards the end of his book, Mr. Davenport comments, 'If it's worth doing, it's worth doing analytically'. The author would reiterate this point, providing focus for those of us working primarily in the digital domain: *If it's worth doing, it's worth doing web analytically.*