

*Are your online metrics aligned with your business objectives? What issues impact your site conversion rates? Do you trust your Web Analytics data? What actions have you taken to improve site performance?*

*The promise of the Internet as a rich, inherently measurable medium continues to elude most organizations. While transactional websites and online marketing initiatives offer an enormous depth and volume of data regarding a user's behavior and actions, most marketers have only been able to gain the most basic insights. They are struggling to get the basics done well and are mired in volumes of inactionable detail.*

*This paper outlines the top challenges preventing organizations from unlocking the value of their Web Analytics data, and recommends how to overcome them in order to begin utilizing Web Analytics as a strategic corporate tool that can be used to optimize business performance and deliver additional return for dollars spent online.*

Web Analytics is the study of the behavior of Website visitors. In a commercial context, Web Analytics especially refers to the use of data collected from a Website to determine which aspects of the Website work towards the business objectives; for example, which landing pages encourage people to make a purchase.

- Wikipedia

## **Challenge 1: Determining Business Meaning**

An initial implementation of a Web Analytics application consists of either the deployment of a JavaScript data collection tag on all pages, or loading a server log into a software application. The JavaScript tag executes every time a Web page is loaded into the browser window, and logs the page view offsite at an application service provider. This method is generally referred to as client-side logging. The leading Web Analytics application vendors, including Omniture, WebTrends, Google Analytics and Core Metrics all offer hosted solutions which operate this way. Although the technical method is very different, the data collected is similar to standard server logs.

Therefore, an initial Web Analytics implementation, regardless of the data collection method, typically delivers basic out-of-box reports, such as top pages, top entry, exit, referrers, next click, and previous click. The reports are based on the URLs visible in the browser.

### **Impact**

Since the initial reports are the standard out-of-box versions, they are often complicated for business users to understand due to the more technical data displayed. The basic reports usually require specialized knowledge about Web Analytics metrics in order to interpret the information. It is often unclear or debatable what the reports mean from a business perspective, and it is difficult to determine whether or not the site is performing effectively.

Producing meaningful reports and analysis is possible, but usually labor intensive (i.e. cutting and pasting), making it challenging to repeat the process frequently and manage the site based on performance on a day-to-day basis. This prevents many business users from being able to utilize the information effectively.

## Goal

A basic, standard implementation is a reasonable first step in a Web Analytics strategy, but the initial development phase should be to utilize the basic data to inform the process of customizing the reports to meet business needs and make them easier for end users to understand. By building in Key Performance Indicators (KPIs) and content naming conventions, business users will be able to gain access to the reports on their own and utilize them for day-to-day decision-making. This will also form the basis for site optimization and testing efforts.

## Recommendations

### ❑ **Anticipate the Need to Customize**

To lower the barrier to deployment, many vendors position Web Analytics software as a turn key solution. Adding additional intelligence into the reports requires customization of the JavaScript tagging that is deployed on the website. It is important to anticipate the need for customization, and build it into the project plan.

### ❑ **Improve Readability**

URLs are typically designed for technical purposes, and are often not easy for business users to read. However, most standard out of the box reports are based on URLs. Many Web Analytics applications that are delivered via a Software as a Service (SaaS) model allow sites to create content groupings and special page names or titles to be displayed within the application instead of the URLs. Omniture and Webtrends, for example both provide this capability.

### ❑ **Set Measurable Objectives**

Successful Web Analytics projects start with a clear business strategy. It is impossible to identify relevant KPIs unless a company has clearly articulated what it is trying to accomplish with its website. KPIs are metrics that gauge whether the site is meeting business objectives. They are typically a combination of user actions (submit a lead, make a purchase, etc.) and traffic volume. For example, Order Conversion rate would be the percentage of visits during which an order was placed. Adding these indicators to reports enables business users to identify performance impacts and manage towards common goals.

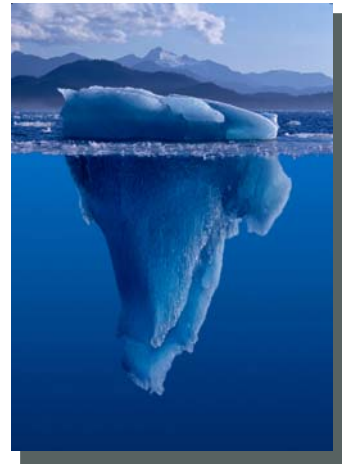
Every Web initiative should be measured by relevant metrics. Companies should ask the question, “How are we going to measure whether or not this is successful?” whenever they deploy new Web initiatives.

### ❑ **Segment Audiences**

Organizations should evaluate site visitors as belonging to specific user, demographic and/or behavioral segments. Some of these may include investors, job seekers, potential customers, and existing customers. Corporate websites often have content that is targeted to users at different points in the customer lifecycle. Use the customer lifecycle to identify which sections of the site target which users and map KPIs accordingly.

### ❑ **Automate Reports and Set Alerts**

Report end users are often responsible for more than analytics. Therefore, in order to encourage frequent report use, automate key reports, such as a standard KPI report that monitors traffic and conversions, and set alerts to detect significant changes in performance.



### ❑ Hire or Train Analytics Experts

Marketers and IT staff are not born as Web Analytics experts. It takes real knowledge and expertise to define KPIs and to uncover relevant trends and opportunities through data analysis. Many companies fail to reap the return on their Web Analytics investments because they neglect to bring in the new talent that is required to analyze the performance of their initiatives.

## Challenge 2: Inaccurate and Inconsistent Data

Organizations often have multiple Web Analytics applications, or other applications that contain website data, such as an ad server, an e-commerce application, e-mail marketing tools or Business Intelligence (BI) applications. When data is rolled-up into a corporate dashboard, or compared between the applications, it often does not line up. This type of cross application comparison is performed frequently with Web Analytics because the raw data is often collected offsite and cannot be audited. Therefore, users compare reports in order to determine if the tool is operating properly.

### Impact

Executives are often frustrated because discrepancies between data sources make it appear as though all the data is inaccurate, since it is unclear which numbers are correct. This causes confusion regarding the true state of the business. The added uncertainty prevents users from taking action on the information. The data discrepancies also make it difficult to compare across business units or websites. If one website is using Omniture and another is using CoreMetrics or Google Analytics, it is unclear if even the basic calculations and benchmarks are comparable.

As a result, end users do not adopt the Web Analytics application because they are not sure if it can be trusted. The discrepancies can also create political churn. For example, owners of one application may refuse to convert to another. This can lead to significant redundant spending and periodic (and expensive) “redeployments” of Web Analytics tools.

### Goal

Executives and Web analysts should be able to work with existing reports with trust and confidence that the information is an accurate representation of performance and can be used to make informed decisions. This is particularly true of high-level dashboards and reports. When systems are compared, it should be done in a productive manner that seeks to resolve differences and use the applications to inform each other.

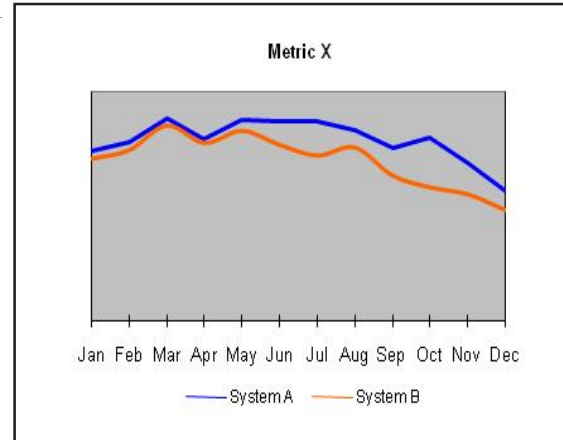
## Recommendations

### ❑ Consolidate

For dashboard-level and executive management reporting, multiple applications create issues because they do not allow a consistent comparison between websites. Multiple applications can also be a barrier to understanding how the overall business interacts online. Also, many Web Analytics applications are on a cost-per-page view scale that introduces economies at higher volumes, creating cost benefits for consolidation.

### ❑ **Expect Application Discrepancies - Within Limits**

Different applications have different methods of collecting and cleansing data. However, when comparing two applications that are running on similar technologies (for example two JavaScript tagging applications), there should be some relationship at a detailed metric level and they often trend in parallel. Alternatively, some applications are too different to create effective comparisons. For example, it is often very difficult to detect a relationship between server and JavaScript-based data sources, even if the same software application is being used to process them.



### ❑ **Choose a System of Record.**

Web Analytics is for reporting on-site traffic. In order to better understand site performance, KPI data, such as orders or registrations, is integrated into the site traffic information. However, web analytics certainly does not replace the financial system or other business intelligence tools. The Web analytics application should be clearly correlated to the system of record so it is clear that the Web data is an accurate and trustworthy indicator of the actual events it is intended to reflect. It can be used for day-to-day operations, but it is directional, and generally not the system of record for non-traffic data.

### ❑ **Introduce a Standard QA Step for Tags.**

One of the primary reasons for Web Analytics application inaccuracies is incomplete or inaccurate tagging. When a tag is not placed on the page, the Web Analytics application captures no traffic information from it. This is particularly troublesome on pages such as marketing landing pages that are often not in the site's standard template. By adding a QA step to check that the tag is in place and correctly configured, many accuracy issues can be prevented.

### ❑ **Consult a Neutral Party.**

Often times, the individual(s) performing the comparison between two systems have a vested interest in the outcome of the analysis. They may also have expertise in one of the applications, but not the other. Application comparisons often require in-depth knowledge of both systems. Consider consulting a third party who does not have a stake in the outcome.

## **Challenge 3: Organizational structures and processes are not sufficient.**

Web Analytics is frequently considered the responsibility of a single individual, or a very small team that is either in Marketing or the Information Technology department. This team or individual owns all aspects of Web Analytics – reporting operations, analysis, specifications, implementation and development, and testing. This team or individual also interfaces with all the reporting end users – marketing, e-Commerce, product, customer service, usability, and other departments.

### **Impact**

The isolation of the Web Analytics reporting functions creates a single point of failure. All the knowledge resides within a specific individual or group, and there is often no documentation, processes or QA standards.

A single person could define the objectives, write the specification, perform QA testing, and build the reports without any checks and balances.

Since no other department shares these responsibilities, Web Analytics often becomes an afterthought during the development process. Changes are released without incorporating the data required in order to measure their impact or, existing reports break because tags are modified or removed from the site. This in turn causes data quality to deteriorate, contributing to accuracy and trust issues.

The Web Analytics team becomes focused on day-to-day maintenance and operations instead of strategic analytics and business optimization.

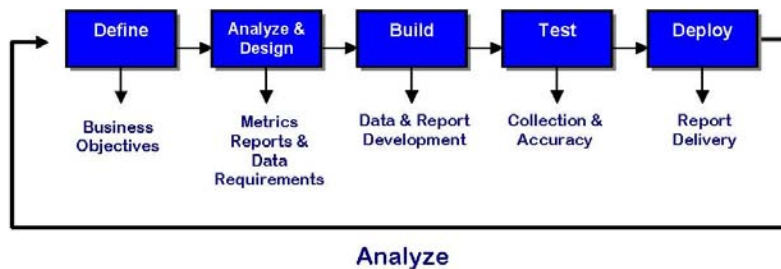
### Goal

Being a data driven organization has two sides. From a data usage perspective, it means employees can access information and integrate it into day-to-day decision making. Each employee who is responsible for delivering web-based activities becomes an information consumer. From an operations perspective, individual employees who are responsible for technical infrastructure are also responsible for the data impacts. Reporting then becomes integrated into each step of the IT process.

### Recommendations

#### ❑ **Distribute Web Analytics IT responsibilities throughout the project lifecycle.**

Program Managers, System Analysts, Developers, and QA Managers should receive training about the Web Analytics touch-points in their responsibilities. For example, a QA manager should receive information about the application standards and functions in order to be able to QA tags for accuracy.



#### ❑ **Distribute day-to-day site monitoring and reporting activities to business owners.**

The business owners responsible for site performance and changes to the site should be responsible for monitoring site performance. Ultimately, the business owner is responsible for the business results and the approver for site changes. The business owner should have training and automated reports, alerts and dashboards in order to enable them.

#### ❑ **Create a center of excellence associated with Web Analytics.**

The Web Analytics team is responsible for empowering IT and business owners with training, documentation, reporting standards, and processes, which includes a reliable reporting tool and set of dashboards, automated reports and alerts. In addition, they should be responsible for site analytics strategy and advanced analytics.

#### ❑ **Organize Web Analytics with other analytics and BI functions.**

In order to facilitate cross-system analysis, data integration and cross-training of analytical staff, the Web Analytics team should be a part of a larger analytics and BI function. This may also include market research, customer satisfaction, usability, and competitive intelligence.

## Challenge 4: Web Analytics Data is Siloed

Web Analytics reporting is based on log files (client or server-side) and is typically about the user's behavior and interactions with the website during the course of one or more site sessions. The Web Analytics system contains the sessionized path, client technical settings, and cookie data. But, other systems also contain information about website activity.

For example, if the user submits a registration form, the form data is stored in a database. The Web Analytics application may contain information if the form was viewed or submitted, and it can be setup to record where a user stopped filling out the form or data from specific fields. But, if the Web Analytics application is configured to store all the form data, it would be redundant with the database, and also limited to just the forms submitted after the Web Analytics configuration was completed.

Many other systems contain information about website performance, not just the Web Analytics application. However, these systems do not 'talk' to each other to share data. In order to gain an understanding of end-to-end performance, it is sometimes necessary to combine Web Analytics data with other applications.

### *Example 1: Email Performance*

Emails Sent	Emails Delivered	Open Rate	Click-Through Rate	Land Rate	Conversion A	Conversion B
10,000	9,500	10%	5%	4.5%	2.2%	1.2%
Email App	Email App	Email App	Email App	Web Analytics	Web Analytics	Web Analytics

### *Example 2: New vs. Returning Customers*

	Visits	Orders	Sales	Avg. Order Value	Order Conversion
New/Non Customers	100,000	2,500	\$100,000	\$40	2.5%
Returning Customers	2,000	200	\$5,000	\$25	10%

Example 1 and 2 show typical reports that many Web Analytics applications can produce. The e-mail performance report is with data from both the e-mail delivery application, and the Web Analytics application. The new vs. returning customers would be determined based on a cookie. This may be appropriate for a B2C site, where a customer is an individual end user. However, for a B2B site, the definition of "customer" is likely an organization, and determined by account records in a CRM system.

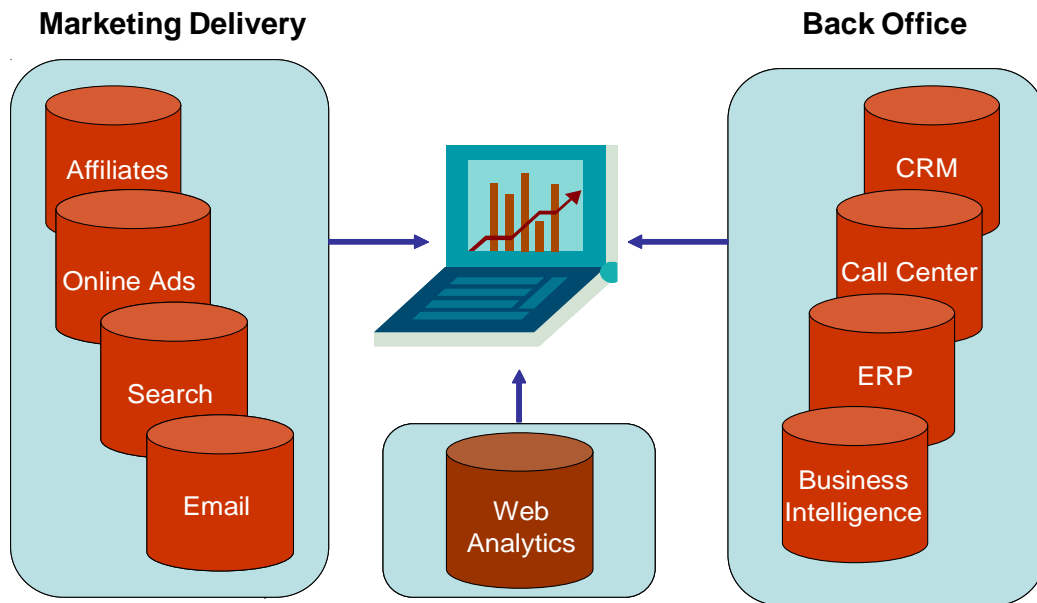
### **Impact**

Since data about marketing programs and site performance resides in multiple applications, analysts often create reports by cutting and pasting data together and calculating by hand. They may also create 'spreadmarts' by exporting reports and cross linking them in excel. This means most of the effort is spent to produce the report, not analyzing the results. Opportunities to gain high-value insights are often lost because the data from multiple systems is not integrated.

### **Goal**

Integrate applications in order to automate reports that are used frequently and to gain additional insights. Especially with respect to reports regarding visitor behavior, targeting and segmentation, it is often necessary to combine multiple data sets. However, not every application integration is of high value. For some systems, perform a 'coordinated' analysis, where information from both applications is taken into account during an analytics exercise.

## Sources of Website Data



Report end users often have difficulty understanding where one application begins and the other ends. Everything about the website's performance appears to be the domain of "Web Analytics" to end users.

## Recommendations

- ❑ **Integrate to Automate**  
For reports that users are cutting and pasting together or creating from "spreadmarts", integrate the applications in order to automate the reporting function and focus end-user time on interpreting and acting on the information.
- ❑ **Populate Executive Dashboards**  
Web analysts are frequently required to cut and paste together executive dashboards. For organizations with a Corporate Performance Management system, the Web Analytics data can not be automated until the corporate database stores traffic data and integrates relevant KPIs into the overall executive dashboard.
- ❑ **Focus on Visitors for Best Return**  
Companies frequently highlight best returns on integration efforts when they can associate visitor data with data from their CRM applications and other commerce transaction history. Marketing and Sales benefit greatly from an ability to target campaigns at customers who have been placed into segments that are a product of demographic, behavioral, and transactional data.
- ❑ **Practice Coordinated Analytics to Reduce Integration Costs**  
For occasional reports and analyses that contain website data and data from other databases that are not regularly reported on together, organizations should simply coordinate analytics. This means the analyst may use data from both applications in a specific analysis, but the applications do not exchange any data. One of the earlier recommendations was to include the Web Analytics function with other centralized reporting functions, and this supports that recommendation.

## Challenge 5: Inertia

Many organizations fail to take advantage of their Web Analytics opportunities because they cannot overcome the obstacles outlined above. If reports are difficult to interpret, considered inaccurate, not transparent to end users, or require too much cutting and pasting due to lack of integration, organizations find it challenging to use the reports as intended. A high percentage of resources are used for report production, and as a result the true value of Web Analytics reporting goes unrealized.

Build a Web strategy around making sure that you know what site visitors are doing and that you act on that knowledge.

- Gartner Group  
6/29/2007

### Impact

The goal of Web Analytics is to drive revenue and cut costs by optimizing site performance. When organizations do not take action based on report data, they lose the opportunities to increase performance and improve user experiences. Web Analytics becomes reporting for reporting's sake, and not an opportunity to gain a competitive advantage. In a competitive Web environment, the organization that does not really understand how its website is performing will almost always lose to the one that has a clear picture of how each initiative contributes to its strategic goals.

### Recommendations

#### ❑ **Build a feedback loop**

In many process flows such as the one shown on page 5, analysis and interpretation is shown as feeding in from the end of the last deployment phase, to the beginning of the next iteration. Develop a process to create that feedback loop. For example, it can be a bi-weekly review or a release assessment, but closing the loop allows users to integrate information from one deployment phase into the next and provides transparency into the data.

#### ❑ **Test to resolve questions**

Business owners of a website are sometimes too close to the objectives and content to have an accurate perception of how users will react to a site. If different opinions or suggestions exist within an organization and it is unclear what direction to move, one option is to test the different suggestions in order to further understand the impact. Ultimately, the test may save more time and resources than the negotiation to come to a resolution.

#### ❑ **Ask "Why?"**

When changes occur in traffic patterns and site performance, regardless if it appears to be an improvement or a decline, ask why the changes occurred, and utilize the data to answer the question. The data may not align with what seems to be the most obvious answer and asking 'Why?' exposes everyone in the information chain to analytical problem-solving in a Web environment.

#### ❑ **Reserve Resources**

If resources are 100% allocated to the next big release, it leaves little room for testing or responsive changes. Reserve a swim lane for responding to data and making changes. They may be near-term adjustments, but the information learned can help inform and improve long-term strategies.

## AB Split and Multivariate Testing Basics

There are two primary methods of testing within the Web Analytics industry, known as AB split and multivariate testing.

An AB split is a test in which there are two test cells, or two page versions A and B, where A is the control, or current page. Traffic is randomized so a subset of the users see the B design, and the remainder of the users see A, the control. Then, reports that show how the different design changed KPIs are generated and analyzed for statistical significance. Given enough traffic, additional versions of a page (C, D, etc.) may be tested side by side.

Depending upon the differences in the designs, it may be difficult to determine what factor caused one design to outperform the others. For example, if the graphics, messaging and colors of the page are entirely different from the other, the only thing the test will show is that one design outperformed the other.

AB Testing is often chosen for more complicated pathing tests. For example, comparing two different shopping cart flows. This is because it can be more costly to develop these flows, and they still have to function correctly within the business environment.

Another variant of AB testing is to rollout a beta version of a site to a small audience and then optimize the site until it can be fully deployed. This is not so much a test, but a method of protecting the existing revenue stream while optimizing new functionality.

In multivariate testing, the elements of the page are broken down into individual factors – the button color, the messaging, the graphic and then presented in different combinations to determine which factors impact performance and then the optimum combination is identified.

Multivariate testing is frequently performed on pages which have a high individual contribution to performance, for example, a homepage or marketing landing pages. The bulk of what is being tested is the design elements of the page, not functionality or features.

## A Web Analytics Implementation Specialist

A Web Analytics implementation is about more than placing a tag on a Web page. It involves business strategy and information complexity similar to that of a BI deployment and has the process and technical complexity similar to that of a website development. A Web Analytics implementation specialist partners with application providers and the website business management to identify what Web Analytics strategy is an organization's best choice and then offers end-to-end implementation and project management services.

### ❑ *Versus Application Vendor Professional Services*

The Web Analytics software application vendors offer services to help deploy Web Analytics software, but they do not offer support to manage the project, implement the tags, or work with other third parties to deploy the application on their site. A Web Analytics Implementation specialist takes a broader view of the project and can supply more resources than just tagging specifications and application knowledge. In addition, a Web Analytics Implementation Specialist offers knowledge of more than a single platform, which is essential for vendor selection or application comparisons or consolidations.

### ❑ *Versus In-House Resources*

Web Analytics touches many disciplines. Since Web Analytics departments are often very small and focused on day-to-day activities, they may not have the appropriate resources or skill sets to approach more strategic projects that offer improvements in productivity and increase insights. A Web Analytics Implementation Specialist augments existing resources for larger projects, and then offers training, documentation and processes to bring in-house staff up to speed.

### ❑ *Versus Marketing Agencies*

Marketing agencies also offer Web Analytics services, but these are generally focused on reporting marketing return on investment for specific campaigns in order to demonstrate effectiveness. A Web Analytics Implementation Specialist offers a holistic approach to marketing tracking, with standard metrics across marketing activities. Increasingly, Web Analytics involves application integration, databases and BI systems that require additional technical skills.



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- Custom tagging strategies
- Phased implementation roadmaps
- Detailed implementation plans
- Deployment findings and recommendations
- Communication and change management procedures
- Website optimization recommendations
- External data integrations
- Advanced analytics and Business Intelligence

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