**Online Experience  
Digital Media Partner Guidelines**

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## 1 Technology Requirements

All proposed software solutions must be submitted to Shaw Media's QA, Development, Cloud Operations and Design teams for review and approval before any work is commenced.

## 1.1 Performance Guidelines

* First byte must load in under 500 milliseconds.
* All page content, including external calls (e.g. ads), must load under 5 seconds. This is prior to site-level edge caching in Akamai.
* These specifications need to be sustained under load; load to be determined on a project-by-project basis by Shaw Media.
* Code under the required maximum load cannot consume more than 25% of server resources (i.e. memory, CPU and disk space).
* SQL queries should execute in less than 1 second even under sustained load; if heavier queries are required, it will need to be reviewed by the Development and Cloud Operations teams for approval.

## 1.2 Security Guidelines

* All sign-in and authentication calls must use HTTPS and 2048 bit encryption.
* HTTPS should use a ‘modern’ TLS configuration. ([Reference](https://wiki.mozilla.org/Security/Server_Side_TLS))
* All passwords in database must be hashed and salted using modern, non-deprecated industry standard algorithms (SHA2). Ref: <https://crackstation.net/hashing-security.htm>
* Sign-up pages and email collection must be over HTTPS with Captcha.
* No external e-mails can be sent without approval by Shaw Media.
* “Remember Me” cookies for sign-in should store information in an encrypted format and flagged for secure browser storage.
* Passwords must not be stored in clear text for cookies or transmitted in plaintext HTTP calls.
* Password complexity must be enforced during sign-up, as per industry standard.
* Whenever possible, web penetration testing will be performed using open source or commercial Web Pen Testing software for common web threats like Input Validation, XSS, CSRF/XSRF, SQLi, Direct Object Reference, Server Side Includes, Session Hijack/Spoofing attacks, etc.

## 1.3 Architecture/Development

* All websites must be compatible with all major desktop and mobile browsers; Shaw Media practices responsive design and our development partners must use responsive techniques to enable cross-platform compatibility.
* Applications must operate in a multi-server, load balanced environment.
* Hosted applications will run behind site level caching through Akamai CDN.
* Any dynamic content will need to be identified and avoid direct server responses whenever possible.
* AJAX interaction is preferred, though exceptions can be defined within the Akamai configuration to expose some pages directly to user. Where this is required, it must be approved by the Development and Cloud Operations teams.
* Any media assets (e.g. images, etc.) must be hosted via Amazon S3 and served from Cloudfront URL under URL convention media.sitename.ca.
* Server code should not be making HTTP requests to images locally, or self or store local copies of the media.
  + Files larger than 120kb should not be used, unless approved by the Development and Cloud Operations teams in advance.
* All pages and interactions require tracking via Omniture analytics.
* All calls to third-party sites (including ads) must be asynchronous.
* All images uploaded through a CMS must be stored in S3 and served with Cloudfront URL (media.sitename.ca/com).
* We use aggressive caching on all static objects like js, css. Versioning is recommended to update browser cache when files are changed.
* The main development stack for Shaw Media web applications is a 3-tier architecture using MVC, Microsoft .NET and MS SQL Server, hosted on IIS7 or above.
* Projects built on a LAMP stack (Linux/Apache/mySQL/PHP) may be approved by the Development and Cloud Operations teams in advance.
* WordPress based solutions are encouraged in this scenario. (See section 1.5 for further requirements on WordPress.

## 1.4 Microsoft Stack

* Projects should be created in Visual Studio 2010 or later. (2012 is preferred).
* Projects should use .NET 4.0 or above. (4.5 is preferred).
* Projects should use MVC 4 or above.
* Projects should use MS SQL Server 2008 R2.
* Content should be hosted in an Ektron CMS (8.7SP2 or higher) wherever possible.

## 1.5 WordPress Requirements

* WordPress builds should be performed on the latest stable release of WordPress.
* WordPress updates will be applied by our Cloud Operations team as they are released, thus code should not be modified as it can be overridden.
* Exceptions to this must be approved by the Development and Cloud Operations teams.
* All code modified in the WordPress CMS will be inside the wp\_content folder as per best practices for WordPress CMS.

## 1.6 Video Requirements

* Any video content should be sourced through our video CMS (thePlatform).
* There should be no direct videos hosted inside the website folders. Those video will be hosted on Shaw Media’s Akamai CDN account and thePlatform CMS.
* The only acceptable video format and encoding spec will be an H.264 MPEG-4 – any other video formats will require an approval in advance.
* Except where prohibited by rights, video content should be compatible on all desktop and mobile browser platforms.

## 1.7 Release Management Process

* All code must be stored on GitHub Shaw Media account and compiled through TeamCity.
  + . NET code must be in the form of NUGET packages.
  + Overall site size should not exceed 250MB. This excludes content such as CMS files stored in Ektron).
* Shaw will host 3 environments, development, staging and production.
* All code pushes from staging to production will be performed by a Shaw Release Manager.
* For new sites, testing should be conducted in the production environment in advance of site launches.
* For existing sites, testing should be conducted in the staging environment in advance of site launches.

## 1.8 Code Ownership

* All developed code will be owned by Shaw, unless terms of licensing agreements state otherwise

## 1.9 Third Party Libraries

* When working on existing projects, any third party libraries (e.g. Knockout) that are not already used in the project’s code must be approved by Shaw before being added to the project.
* When working on new projects, any third party libraries (e.g. Knockout) must be approved by Shaw before being added to the project.

## 1.10 Coding Standards

* General Syntax
  + All code blocks (regardless of their content) are contained within set braces { }.
  + Comments are required when code is complex or unclear.
* C# Syntax
  + Set braces should be on their own line (not like this: if (x) { ).
  + Do not leave empty classes or methods in code base unless absolutely necessary (e.g. enforced by interface).
  + Use regions as needed, however please do not nest regions and do not create empty regions.
  + Objects that implement IDisposable should be wrapped in a “using” statement or otherwise properly disposed of.
  + All calls to instance methods, variables and properties should be prefixed with “this”.
* C# Class, Interface, Property, Method, and Variable naming conventions
  + One class/interface per file; the file should have the same name as the class/interface.
  + Class, Interface, and Property names use PascalCasing (e.g. this.Method()).
  + Local variables and method parameters use camelCasing (e.g. this.Property).
  + Member variables (when absolutely necessary) use camelCasing prefixed with an underscore (e.g. \_memberVariable).
  + Static variables (regardless of scope) use PascalCasing.
  + Const declarations use UPPER\_CASE letters only using underscores to separate words.
* CSS / SCSS Syntax
  + Use classes, not IDs for styling (e.g. .title { instead of #title { ).
  + IDs are used as JavaScript targets only and are prefixed with “js-” (e.g. js-menuToggle).
  + Class everything, don’t style tags (e.g. .link-primary { instead of a { ).
  + List CSS properties in alphabetical order, with sass commands such as @include always at the beginning and vendor prefixed properties (e.g. webkit) always at the end.
  + Utility classes (e.g. floats, containing floats, vertical alignment, text truncation, etc.) reside in their own file, ideally a partial scss file called \_utility.scss.
  + Utilities classes use a camelCase name prefixed with a u namespace (e.g. u-textBreak).
  + Classes use the BEM (Block, Element, Modifider) convention in camelCase:
  + <componentName>[--modifierName|-descendantName]
  + e.g. .header, .header-menu, .header-menu--primary
  + Append “is-stateName” for state-based modifications of components, but never style these classes directly; they should always be used as an adjoining class
  + .tweet {
  + .tweet.is-expanded {
* Variables names use <property>-<name/value>[--componentName]
  + $color-primary
  + $color-highlight--heroImage
  + $width-wide

## 2 Ad Implementation Requirements

## 2.1 Display – Desktop/Mobile Web:

* All pages must be coded for Google’s DFP Premium ad server using Google Publisher Tags.
  + Please visit <https://support.google.com/dfp_premium/topic/4390040?hl=en&ref_topic=28788> for specifications on how to develop Google Publisher Tags.

## 2.2 Display – Mobile Applications:

* Mobile applications must be coded to use the latest Google Mobile Ads SDK. Utilizing any other versions will require an advanced approval by our Ad Ops Team.
  + Please visit https://support.google.com/dfp\_premium/answer/2529602 for specifications on how to use the Google Mobile Ads SDK.
* Specific tagging logic and key value requirements will be communicated on project-by-project basis.

## 3 Quality Assurance Requirements

It is expected that development partners will have Quality Assurance teams in place to manage all functional testing with respect to the development of any applications or websites.

The development partner’s QA team must supply **Business Requirements**, **Test Cases**, and **Test Results** to Shaw Media’s Quality Assurance Team for review. Shaw Media's QA Team will be responsible for the integration (where applicable) of Regression, UAT and Performance Testing of delivered work.

For a list of all required supported devices please refer to the Digital Media License Agreement.

## 3.1 Regression Testing:

* Should defects be discovered by a Shaw Media QA analyst during UAT or Performance Testing, it is expected that the development partner will resolve these defects immediately.
* Vendor/partner will be required to provide the following Regression Testing entry criteria to the Shaw Media QA team:
  + 100% Code Complete.
  + Test Cases provided.
  + Test Results provided.
* Shaw Media’s bug tool will be utilized for tracking defects.
  + External vendor’s stakeholders will be provided access to the tool, however their development teams will be responsible for fixing logged defects.
  + All Critical and Major defects will need be addressed in a timely manager (i.e. P1s and P2s) by development partner.

## 3.2 Definition of Defect Severity:

* Shaw reserves the right to designate severity and priority level for all issues and defects.
* Any workarounds would need to be discussed and approved by Shaw Media’s QA Team.
* Severity tiers are defined as:
  + Critical: Defects that affect critical functionality or critical data which don't have a workaround (e.g., crashes, major features broken, ads not displaying, wrong Omniture implementation, etc.).
  + Major: Defects that affect major functionality, but with a workaround which can temporarily solve the issue without significantly affecting the user experience (e.g., broken layouts, server errors, broken search functionality).
  + Minor: Defects that affect minor functionality or non-critical data (e.g., minor layout discrepancies, discreet spelling errors, misleading error messages).
* Vendor/partner resources should be available and dedicated to the Shaw team, with clear contact information available for escalation within response and resolution times outlined in the Digital Media License Agreement.
* Vendor/partner will provide Shaw with emergency contact information for Shaw’s use should Critical support be required outside of regular business hours.

## 3.3 Cases where vendor/partner does not supply Quality Assurance services:

* Shaw Media's QA Team will be responsible for testing development partner’s development work.
* Shaw Media’s bug tool will be utilized for tracking defects.
  + External vendor’s stakeholders will be provided access to the tool, however their development teams will be responsible for fixing logged defects.
  + All Critical and Major defects will need to be addressed in a timely manner (i.e. P1s and P2s) by development partner.

## 4 Digital Analytics Requirements

## 4.1 Technical Analytics Support:

* Vendor/partner resources should be available and dedicated to Shaw Media Analytics team, with clear contact information available for escalation within response times outlined below:
  + Critical: Resolved within 8 hours (during business hours)
  + Major: Resolved within 48 hours
  + Minor: Resolved within 5 working days
* Vendor/partner technical resources should have an expertise in Adobe Analytics implementation; certified professionals in this area would be ideal.
* Wherever applicable, detailed documentation around the response to the requirements from the Shaw Media’s Analytics team is required (i.e. ETA, quotation, delivery of service etc.).

## 4.2 Security:

* If the vendor/partner does not give the Shaw Media team full control over analytics, then we will need to agree to details regarding the physical hosted environment and protection of data/servers.
* Speed of service (e.g. page load times) needs to be monitored; if tracking tags are slowing down site loading time then vendor/partner should raise this issue with Shaw Media analytics team immediately.

## 4.3 Communication:

* Agreed points of contact for Digital Analytics to be agreed upon at outset of a project.

## 5 SEO Requirements

### Adwords SEM Conversion Tracking must be supplied to Shaw four weeks prior to site launch.

### Google Analytics Universal Tracking Code will be provided, please contact [Shad.Jafari@shawmedia.ca](mailto:Shad.Jafari@shawmedia.ca)

## Once all pages have been developed, precise title tag descriptions must be requested from [Shad.Jafari@shawmedia.ca](mailto:Shad.Jafari@shawmedia.ca)

**5.1 Headers: Robots**

* All websites published for Shaw Media must have the following tags on all global headers of a website.
* (No exceptions on the following)

**Robots.txt**

* The robots.txt is a simple text file, hosted on the root of a web site that informs search engine bots how to crawl and index website or web pages. By default search engine bots should crawl everything possible unless they are forbidden from doing so. Search engines always scan the robots.txt file before crawling the web site. Declaring a robots.txt means that visitors (bots) are not allowed to index sensitive data but it doesn’t mean that they can’t.

**Implementation:**

* Root folder of site should have a static file called “robots.txt” which will be populated with the below. Note, not all folders below are needed, depending on the site and CMS setup for the given project.

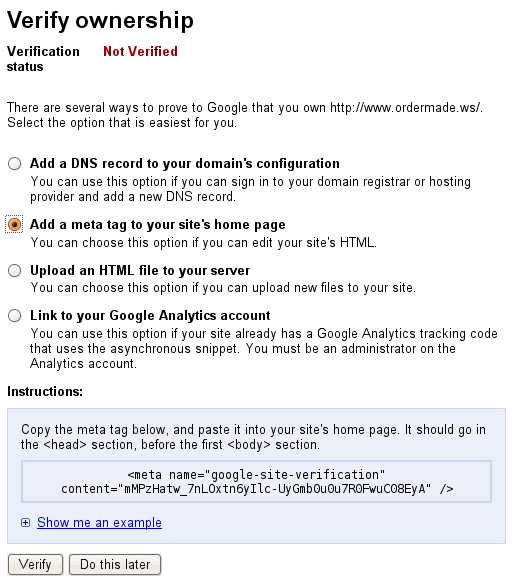
|  |  |
| --- | --- |
| **Line** | **Contents** |
| 1 | User-agent: \* |
| 2 | Disallow: /pages/searchresult.aspx |
| 3 | Disallow: /Pages/searchresult.aspx |
| 4 | Disallow: /Pages/Searchresult.aspx |
| 5 | Disallow: /workarea/ |
| 6 | Disallow: /WorkArea/ |
| 7 | Disallow: /Workarea/ |
| 8 | Disallow: /cmslogin.aspx |
| 9 | Disallow: /CMSLogin.aspx |

## 5.2 Headers: Webmaster Tools

* Google Webmaster Tools is a free service that provides fast amount of technical information for a website directly from Google. As such, all Shaw Media sites must be produced with Webmaster Tools Verification Code.
* Before the launch of any site, Vendors must contact [Shad.Jafari@shawmedia.ca](mailto:Shad.Jafari@shawmedia.ca) in order to setup and obtain Verification.

**Implementation:**

* Once Shad Jafari supplies the verification code, please implement the tag within the first 20 lines of code of the sites global, or universal header file.



**5.3 Headers: Dynamic Title Tag & Description**

* The HTML title tag defines the name of a web page and should be used to describe content of that page in a concise way. Thus, what is placed between the opening and closing HTML title tag is extremely important for both usability and Search Engine Optimization (SEO).
* Before the launch of any site, Vendors must contact [Shad.Jafari@shawmedia.ca](mailto:Shad.Jafari@shawmedia.ca) in order to receive the optimized title tags for implementation.

**Implementation:**

* Once, Shad Jafari supplies the optimized title tags, please implement said tag within the first 20 lines of code, of the sites global, or universal header file.

Title Tag Example:

****Description Tag Example:

Note – all title & description tags must be approved by SEO QA prior to launch

**5.4 On Page: H1 Headers**

* There are 6 tags that define a heading in HTML.  These tags are designated from H1 to H6.  By default, the H1 tag is the largest or most important heading while the H6 is the least.  All of these tags are supported by all major browsers.
* All pages must have one H1 Tag above the fold.
* Before the launch of any site, Vendors must contact [Shad.Jafari@shawmedia.ca](mailto:Shad.Jafari@shawmedia.ca) in order to receive the optimized H1 tags for implementation.

**Implementation:**

* Once the optimized H1 tags are supplied, please implement said tag as visible text.

**5.5 OG Tags**

**Generic Page:**

<meta property="og:image" content="http://(URL OF IMAGE)jpg"/>

<meta property="og:title" content="SAME AS PAGE TITLE”

<meta property="og:url" content="http://(URL OF PAGE)"/>

<meta property="og:site\_name" content="TITLE TAGE"/>

<meta property="og:description" content="SAME AS PAGE DESCRIPTION">

**Video Page:**

<meta name="title" content="PAGE TITLE NAME”/>

<meta name="description" content="PAGE DESCRIPTION"/>

<meta name="video\_width" content="854"/>

<meta name="video\_height" content="480"/>

<meta name="video\_type" content="application/x-shockwave-flash"/>

<link rel="image\_src" href="FULL IMAGE URL”/>

<link rel="thumbnail\_src" href="THUMBNAIL URL"/>

<link rel="canonical" href="ABSOLUTE URL"/>

<meta property="og:type" content="video.tv\_show"/>

<meta property="og:url" content="URL OF VIDEO"/>

<meta property="og:image" content="VIDEO IMAGE URL"/>

<meta property="og:locale" content="en\_US" />

<meta property="og:site\_name" content="SITE NAME" />

<meta property="og:video" content="ABSOLUTE VIDEO URL" />

<meta property="og:video:width" content="854"/>

<meta property="og:video:height" content="480"/>

<meta property="og:video:type" content="application/x-shockwave-flash"/>

<meta property="video:duration" content="1302"/>

<meta property="video:tag" content="SYNOPSIS"/>