Ensighten Data Layer (EDL)

The Missing Link in Data Management
Introduction

Digital properties are a nexus of customer centric data from multiple vectors and sources. This is a wealthy source of business-relevant data that can be leveraged to augment the effectiveness of your marketing efforts. Integrating your data into your digital marketing tools is an extremely powerful technique for enriching your digital marketing capabilities; enabling greater targeting, intelligence, segmentation, and profiling based on the valuable information most relevant to your particular business.

Most marketing vendors want you to use your data to power their own services they are selling to you - services such as online advertising, profiling, decision engine, predictive modeling, optimization, and more. Some will even sell your data that they collect from you, getting financial benefit of your data’s value. Instead of just giving away your valuable data and being dependent, or locked in, with your marketing vendors, you can build a comprehensive data management framework. Ensighten’s Data Layer solution helps you take control, manage, and really own your own data.

Evolution of Data Layers

Mention Data Layers to different people and it will mean different things. However, most agree that the term refers to a layer of available data on your website which can be leveraged for analytics and marketing action. This available data can be found in numerous places and sources - in the meta tags of your pages, customer browser details, cookies, URL query or tracking parameters, Javascript objects provided by your backend IT teams, 3rd party data feeds, and even your page content itself. With so many sources of data and differing definitions, it can become confusing to understand and communicate on the topic without a common conceptual framework. With that in mind, it may be worthwhile to take a look at how the data layer as used by marketing and analytics teams has evolved over the years.

Embedded Page Data

Traditionally, the data that marketers and analysts required has been managed and exposed by in house IT groups. Since any online business is powered by its own backend data inherently, IT developers have always been leveraging their company’s own business, product, and CRM data to one degree or another. So in the early days when analysts and marketers needed to install analytics and marketing tools they would request the data from IT which was then hardcoded into their tag implementations.

Implementations became more sophisticated as the number of analytics and marketing tools and capabilities increased. In response to this growing desire for data access, many IT organizations began to expose their valuable in house data as Embedded Page Data hardcoded on their website pages so that the data would be able to be leveraged for all tags in a more efficient manner.
However, as history has shown, this approach is not without its limitations. For some organizations, the speed of Marketing is relatively faster than the speed of IT releases. For others, making tag and data changes or fixes is not viewed as top priority and thus the marketer or analyst did not always have the necessary data available to perform their functions to the best of their ability. And as new data sources became available such as 3rd party data feeds and dynamic interaction events, having IT manage the data layer in hardcoded form on the website was no longer sufficient to meet marketing needs. Therefore, new approaches to managing the data layer evolved.

Considering the special access that IT organizations have to their own in house business data, there is still tremendous value in the data that they can expose. But instead of putting the burden of managing the entire data layer solution as Embedded Page Data, IT organizations can focus on embedding their valuable data as simply a single data source to be ingested by the data layer solution as a whole. Ensighten has been participating in the W3C community who has recently released a Customer Experience Digital Data Layer specification to help standardize the data format for IT organizations to leverage. While these specifications are not mandatory, they help set a common data format to ensure that embedded data is consistent and future proof as a reusable data source for marketing and analytics tools to access.

Javascript Data Frameworks

With the emergence of Data Management Platforms (DMP) and Tag Management Systems (TMS), new data sources and data management capabilities became available to the online business. 3rd Party data feeds often integrated into the business’ website in the form of externally loaded Javascript objects that made this data available and actionable, yet were inherently separate data sources with different naming conventions and data structure. In order to unify all these disparate data sources into a single, reusable repository for marketers and analysts, new data layer solutions emerged in the form of data management frameworks. These data management frameworks work to consolidate different data sources by providing an abstracted Javascript object that acts as a common programming interface for accessing all available data.

Through this new level of abstraction, Javascript Data Frameworks can provide marketers and analysts the ability to redefine and transform their data with custom, semantic naming conventions that are more meaningful to the business and alter the data value format to suit the requirements of specific tags vs. being stuck with the name and value format provided by the original data source. This ensures a level of consistency and common language for the tools that ingest this data. Additionally, by mapping tags to this abstracted layer of data during tag implementations, accommodating any changes made by the data source can be done in a single location that all tags will inherit which is far more efficient than having to update the data references for each tag individually.

While this is a more efficient and agile approach to managing data compared to the IT embedded page object, this Javascript Data Frameworks are typically non-persistent and must be compiled via Javascript at the start of each page load. As such, these solutions are generally not able to store and calculate metrics such as page views and time on site or retain profile information such as product affinities on their own. Instead, the business must rely on 3rd party marketing and analytics tools to store and calculate all such information and may not be able to retrieve those calculations fast enough for real-time marketing action.
Ensighten’s Data Layer solution is the next step of evolution for data layer management, incorporating the best of Embedded Page Data and Javascript Data Frameworks while introducing new data management capabilities for storing data persistently at your 1st party domain level. Data persistency is the key to performing calculated metrics and profiling customer affinities, ensuring that you retain ownership of intelligent customer profiles and making them available and reusable for all tags.

Ensighten Data Layers empowers you to choose and define special references to the business-relevant data that you care about most and organize it into a reusable repository that streamlines where it goes and how it is used in real-time. This approach ensures that you get to keep your own data and leverage the full benefit of that value regardless of which vendor you choose to integrate with today, and in the future. This also removes the dependency on any outside party and you are no longer locked in to any one marketing tool, so replacing one vendor with another is much more efficiently and easily done without having to start your data collection all over again with each new implementation.

Managing your data is easy to do using an intuitive point and click interface. Use Ensighten Visual Tagger to build your Ensighten Data Layer within Ensighten Manage which empowers you to make marketing decisions based on customer profile data and set conditional targeting rules to deliver relevant experiences. Once your Ensighten Data Layer is set up in Ensighten Manage, new data sources will become available to you including mobile, offsite, and offline Big Data through innovative integrations with Ensighten Mobile and Ensighten Activate.

The Ensighten Data Layer solution is the revolutionary foundation that makes all this possible and its capabilities are an order of magnitude greater than the previous evolutions of data management by comparison:

<table>
<thead>
<tr>
<th>Hardcoded Data</th>
<th>Javascript Data Framework</th>
<th>Ensighten Data Layer</th>
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</thead>
<tbody>
<tr>
<td>Embedded Page Data</td>
<td>Javascript Data Framework</td>
<td>Ensighten Data Layer</td>
</tr>
<tr>
<td>Abstracted Data</td>
<td>Persistent Data</td>
<td>Mobile Data</td>
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<tr>
<td>Persistent Data</td>
<td>Mobile Data</td>
<td>Off-site Data</td>
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<tr>
<td>Mobile Data</td>
<td>Off-line Data</td>
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Ensighten Data Layer benefits include:

- Easy, point & click setup using Ensighten Visual Tagger
- Build once, maintain a single source of data.
- Easily accessible and reusable by all tags using Ensighten Manage.
- Minimize impact of site-wide data changes to tags.
- Quickly implement new tags with data.
- Consistent data quality for all tags.
- No more vendor lock-in.
- Calculated metrics and customer affinities.
- 1:1 persistent customer profiles.
- Enrich optimization with enhanced targeting and personalization.
- Incorporates mobile, offsite, and offline data through Ensighten Mobile and Ensighten Activate.

While your data values remain stored at your 1st party domain level, the special references to your data that you’ve defined can be managed intuitively within Ensighten Manage and used as targeting conditions and tag integrations. Acting as a centralizing core for your data, the Ensighten Data Layer solution lays the foundation for ingesting new data sources for mobile, offsite, and offline data to give you a real-time, omni-channel 360° view of your customer with 360° marketing action powered by 1:1 persistent customer profiles.

Ensighten Manage is the only TMS that does not introduce the issue of page “flicker” when optimization tags are deployed within the system.

Real-Time 360° View & 360° Targeted Action

- Activate One
  - Off-line
- Activate Pulse
  - Off-site
- Ensighten Mobile
  - Mobile
- Ensighten Data Layer
  - Persistent
- Javascript Data Frameworks
  - Abstracted
- Embedded Page Data
  - Hardcoded
Summary

Going back to the original business intent, the whole purpose of a data layer solution is to operationalize data management in order to support marketing action. And at the end of the day, marketing is about having a conversation and building a relationship with your customers which, when translated into digital terms, is simply a contextual exchange of data and decisions. So the more complete your data set and capabilities, the better you will be able to construct an omnichannel 360° view of your customer and take real-time 360° targeted action. Businesses that invest in effective data and tag management lay the foundation for future success.

About the Authors

Derek Gilbert and Chris Zakharoff have been implementing data layers and running world class optimization programs for the better part of a decade. With backgrounds that span across industries, they have helped scores of Fortune 500 and Global 50 companies enable successful optimization programs through consulting expertise and extensive applied marketing experience.

About Ensighten

Ensighten is a developer of a breakthrough Agile Marketing Platform that solves the rapidly growing problems and complexities of analytics implementations and real-time marketing action. Established in 2009, Ensighten’s patent-pending technology can be implemented easily with a single line of code, enabling superior data clarity and tracking of online behavior, extending the functionality of vendor tools, reducing vendor switching costs, improving site performance, and virtually eliminating the requirements for IT, agency and vendor resources to handle tagging-related tasks. Ensighten enables IT departments to empower marketers and web analytics specialists to independently manage, update and remove tags, in any technology environment through the intuitive Ensighten Manage interface. As leaders in the web analytics industry for over a decade, Ensighten’s founders bring unmatched depth of experience to address the most challenging enterprise requirements.