



## SAS® for Customer Experience Analytics

Learn how to turn Web site usage data into valuable insights about your customers

### What does SAS® for Customer Experience Analytics do?

SAS for Customer Experience Analytics translates Web events into business context, enabling you to understand how well your online experience is working from your customer's perspective. It transforms what your customers are doing online into an understanding of your organization's real-time experience, with interactive reporting, behavioral analysis and detailed playback of customer interactions.

### Why is SAS® for Customer Experience Analytics important?

It helps organizations increase the breadth of their online analytics from technology-led page analysis to customer-oriented experience and behavioral analysis. The online channel is brought into the mainstream of your marketing, business and channel management activities.

### Who is SAS® for Customer Experience Analytics designed for?

The solution is designed for Web-based and multichannel organizations with a strategic investment in e-business that requires an in-depth understanding of the customer experience within the online channel and across other business channels. These organizations need to quantify the returns on their direct marketing and online advertising spend.



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### Overview

Customers have increasingly high expectations of the experience they have when interacting with your organization. Whether visiting your Web site or talking to a representative in your call center, they expect to be recognized and treated consistently across all channels.

To get the proper context about what happens when customers visit your Web site, you need to capture detailed data about how they are using your site, along with other attributes that help better describe those customers. Therefore, it's critical that the steady stream of Web data that floods your organization is translated into its business context and integrated into your mainstream marketing activities. This will enable your marketers to get — for the first time — answers to questions that can't get answered by their current Web analytics solution:

- How do I identify the customers that prefer to research online and then purchase offline?
- Which of my online campaigns were most successful in acquiring customers that turned out to be loyal and highly profitable?
- Which products are my customers researching online so that I can make them an appropriate offer?

SAS for Customer Experience Analytics captures every interaction a customer has on your Web site, transforms it into customer-centric knowledge and integrates with other channel views to provide a more complete picture of the customer. This approach allows organizations to more effectively understand,

model and ultimately market to these same customers. All of these features are deployed with an efficient data collection mechanism that reduces the total cost of ownership, and immediately deliver customer insights to your organization.

### Key benefits

#### A unified, complete view of the customer

SAS for Customer Experience Analytics, as part of the SAS Customer Intelligence suite, has visibility into the online channel integrated with information from other touch points such as the call center, direct mail and point of sale. As a result, you can combine disparate data sources within a pre-defined customer experience data model. This complete view of the customer provides insight on their true needs, resulting in more relevant campaigns, and more efficient marketing expenditures.

#### Improved multichannel contact strategy

When used with the SAS Customer Intelligence suite, SAS for Customer Experience Analytics gives marketers the breadth of capabilities needed to turn customer experience insights into marketing campaign execution. Integrating your Web channel with the campaign management, marketing optimization, event triggering and real-time decision making products allows you to automate all aspects of customer marketing activities within a single platform. Marketers need this complete arsenal of options to most effectively target customers with relevant communications while closing the loop on responses that did not have the desired outcome.

## Better insights equal better marketing performance

Marketers, faced with the increasing demands of delivering more results with the same staff, don't often have the luxury or in-house expertise to develop the latest forecasting techniques for their marketing initiatives. SAS for Customer Experience Analytics includes pre-built, proven predictive models that give marketers a forward-looking view of their campaigns. These analytic models help you understand the most significant business drivers, forecast how these drivers and business measures will perform in the future, and run goal-seeking routines to determine the optimal levels needed for each business driver — without using a statistician.

## Reduced cost of ownership

A single line of HTML code within the Web page supports the dynamic collection of complete, detailed, accurate customer interaction data without heavy tagging overhead. Any changes made to the Web page design are automatically accounted for during data capture, eliminating the need to continually re-tag the Web page objects that you need to record. As a result, implementation efforts can be achieved in as little as a few days, while maintenance costs are far less than data capture achieved through traditional tagging methods.

## Product overview

### Open data model supports immediate data analysis

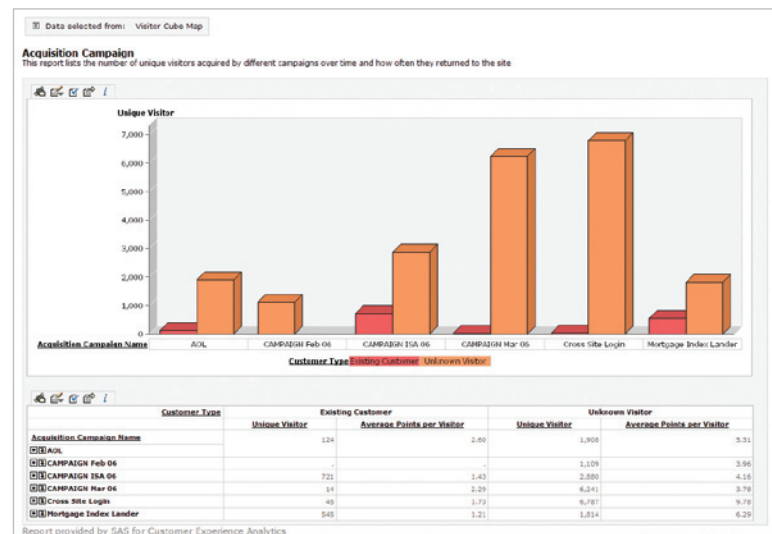
The solution houses all online data in an open data model that promotes further data exploration and analysis. Online data is logically structured within a pre-defined business context, enabling ad hoc reporting to be performed quickly by nontechnical staff. Pre-built data transformations further convert the gathered data into information that

can be analyzed and reported on at a customer level. These transformations occur within the solution through a parameter-driven application of business rules. Because it's possible to put the data into its proper context within the solution, Web site administrators won't have to spend time applying new tags every time there's a change to the page design. Pre-built data models allow for immediate data analysis and

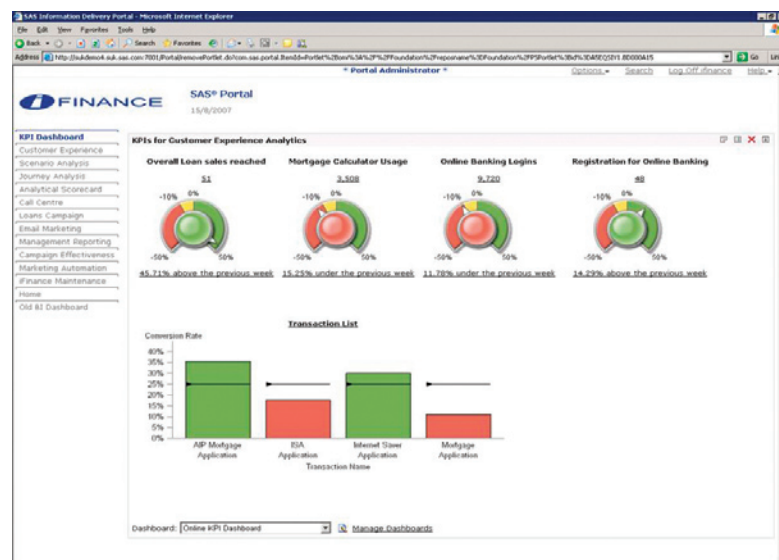
reporting — eliminating the burden on your IT staff to design a complex data loading and reporting infrastructure.

### Self-service, Web-based reporting

The Web-based, easy-to-use reporting is specifically designed for a wide range of users who want to view, interact, author and distribute both public and private reports. Decision makers can interactively get the information



SAS for Customer Experience Analytics features graphical, ad hoc reporting capabilities which quickly show how different campaigns drive the acquisition and retention of customers.



SAS for Customer Experience Analytics allows users to easily create, deploy and view interactive graphical dashboards providing timely information on business goals and key performance indicators.

they need — driving faster and more focused business decisions while freeing IT staff, minimizing administrative overheads and maximizing resource utilization. Data selection is simplified for nontechnical users by presenting data in everyday business terminology. As users' needs evolve, they can create their own ad hoc reports and use more sophisticated layout and query capabilities such as defining custom calculations, complex filter combinations and other manipulations that you would expect of an enterprise-class business intelligence solution. Interactive clickstream visualization through the Interactive Funnel and Pathing features allow you to explore all aspects of customer interactions across all types of Web sites. Both Funnels and Paths can be further filtered by any session-related attributes — including customer, customer segment, company, etc. — providing a critical customer context to the analysis.

### **Component of the SAS® Customer Intelligence suite**

SAS for Customer Experience Analytics fully integrates with the SAS Customer Intelligence suite, leveraging an environment that's optimized for analyzing and executing campaigns at a customer level. Using the SAS Customer Intelligence suite, all of the tools marketers need to manage their multichannel targeted marketing efforts are just a few clicks away — within a unified environment. Multichannel, multiwave customer-specific campaign design and execution can be achieved using SAS Marketing Automation. Combine SAS for Customer Experience Analytics with SAS Marketing Optimization to discover the best possible offers for each individual customer. Further enhance the quality of each customer's experience by integrating with SAS Real-Time Decision Manager, which delivers real-time offers to your interactive customer channels.

## **Key features**

### **Open data model to allow integration of offline and other channel data**

- Stores data in a customer-centric open data model.
- Translates technical online data into business relevant information.
- Allows other customer-related data to be integrated.
- Utilizes parameterized business rules to allow for quick and easy adjustments with Web site changes — even retrospectively.
- Uses captured data immediately for reporting and further in-depth analysis.

### **Self-service, Web-based reporting**

- Easily create, deploy and view interactive, graphical dashboards.
- Query and report using a Web-based interface.
- Execute, view and modify pre-built included Web-based reports.
- Easily search and navigate reports organized in hierarchical folder.
- Export, schedule, distribute and print reports.
- Create standard and ad hoc reports.
- Interactively view a hierarchical tree of the customer's journey through the site.
- Use analytic model-based filtering to remove noise of casual viewers so you can better understand how customers are truly navigating the site, and identify drop-offs and conversions from event to event.

### **Component of the SAS® Customer Intelligence suite**

- Fully integrates with the SAS Customer Intelligence suite.
- Enables closed-loop marketing communications across channels.
- Powers real-time decision management deployment.

### **Built-in predictive models, forecasting and goal-seeking routines**

- View easy-to-understand predictive models for each business goal.
- Customize goal-seeking routines that display what adjustments of a driver will deliver the desired increase or decrease in the target business goal.
- Forecast each business goal to enable forward-looking trends and expected outcomes.

### **Dynamic data collection**

- Use a single line of HTML to efficiently collect all data from a page.
- Capture data exactly as it is seen in the browser window.
- Record virtually every action happening on a Web page.
- Collect data with a system that is compatible with any type of Web site configuration.
- Precisely replay the specific customer experience from your Web site for a specific session.
- Protect sensitive data using industry-standard encryption techniques.

### **Decision support administration**

- Centrally administer users and manage access to reports and data.
- Set security on individual reports, report folders, etc.
- Use a single point of control for all business data descriptions.
- Define authentication infrastructure (host, LDAP or Active Directory).

### **Built-in predictive models, forecasting and goal-seeking routines**

SAS for Customer Experience Analytics incorporates pre-built analytics to help marketers project whether or not specific business goals will be met in the future, based on the performance drivers and metrics of a current market-

ing campaign. You can take things a step further by identifying the most significant underlying drivers of a particular business metric and presenting them in an easy-to-use business report. Goal-seeking capabilities are also available, allowing users to determine the optimal levels needed for each driver that impacts a particular business goal.

All of these advanced statistical and optimization routines are pre-built and therefore do not require statistical expertise to run or develop them.

### Dynamic data collection

The same single line of HTML is used on every Web page to automatically obtain page information, including what the customer does and sees on the page, as well as every interaction. Marketers can even replay the customer's online session and every action on video to audit a specific customer's online experience. All data in its most basic form — the ordering and timing of elements loading on a page, the hovering of a mouse over a selection, each keystroke in a form — can be recorded. Accuracy is assured, and because there are no third-party issues to worry about, cookie blockers and firewalls are not obstacles to understanding. Privacy, security and data protection issues are rigorously managed, and sensitive data (such as passwords) is encrypted using industry-standard encryption techniques, mitigating security concerns.

## Technical requirements

### Administration client environment

SAS for Customer Experience Analytics runs in a Windows desktop environment:

- Windows (x86-32): Windows 2000 Professional, Windows XP Professional
- Internet Explorer 5.5 and 6

### Reporting client environment

- Internet Explorer 5.5 and 6

### Server environment

SAS Servers, including Base SAS and SAS Metadata Server, can be installed on one or more hardware systems in a multi-tier configuration:

- AIX: Release 5.1, 5.2, 5.3 on POWER
- HP-UX PA-RISC: Release 11i Version 1, 2 and 3
- HP-UX Itanium: Release 11i Version 1, 2 and 3
- Linux for Intel (x86-32): Red Hat Linux 8.0, RHAS 2.1, RHEL 3.0 and 4.0, SuSE SLES 8 and 9
- Linux for Itanium (64-bit): Red Hat RHEL 3.0
- Solaris on SPARC: Version 8, 9, 10
- Solaris on x64: Version 10
- Windows (x86-32): Windows NT 4 Server, Windows 2000 Server, Windows Server 2003
- Windows (on Itanium): Windows Server 2003 for Itanium-based systems
- z/OS: Version 1 and higher

### Data collection server:

Windows 2000/2003 server or Solaris 10 (x64 and SPARC)

### Web tier

SAS includes a reference implementation of Apache Tomcat. Sites can optionally choose to implement on WebLogic or WebSphere:

- BEA WebLogic (AIX, HP-UX Itanium, Solaris, Windows 2000 Server, Windows Server 2003)
- IBM WebSphere (AIX, Windows 2000 Server, Windows Server 2003)
- Tomcat (AIX, HP-UX Itanium, Solaris, Windows 2000 Server, Windows Server 2003)

### Optional software

- ESRI ArcGIS 9.0 Server with Service Pack 2 is required for a GIS-enabled SAS Enterprise BI Server.
- Platform Suite for SAS from Platform Computing is available for SAS BI Server and SAS Enterprise BI Server.

SAS Enterprise Guide® and SAS AppDev Studio™ are optional components of SAS Enterprise BI Server.

*Please contact your SAS representative with any additional questions about technical requirements.*



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