KPIs for the Four Types of Site

At the start of this book, we looked at the many metrics you can track in order to understand your online presence. Those metrics you track and how you weigh them is your *monitoring mix*. Recall that there are four site archetypes: media, transaction, collaboration, and SaaS. The one that you're running dictates which metrics and KPIs matter most to you. Table A-1 shows how important each element of the monitoring mix is to each type of site.

Table A-1. The monitoring mixes for the four major site types[a]

	Media	Transaction	Collaboration	SaaS
How well did visitors benefit my business?				
Conversion and abandonment	1	4	1	3
Click-outs	4	1	3	1
Offline activity	1	3	1	3
Subscriptions	4	1	2	1
Billing and account use	1	1	1	4
Where is my traffic coming from?				
Referring URLs	3	4	3	1
Inbound links from social tools	4	3	3	1
Visitor motivation	2	4	3	1
What's working best (and worst)?				
Site effectiveness	2	4	2	1
Ad and campaign effectiveness	1	4	1	1
Findability and search effectiveness	4	3	3	1

What's working best (and worst)?				
Trouble-ticketing and escalation	1	1	2	4
Content popularity	4	2	4	1
Usability	2	4	4	3
User productivity	1	1	3	4
Community rankings and rewards	3	2	4	1
How good is my relationship with my users?				
Loyalty	4	3	3	1
Enrollment	4	2	2	1
Reach	3	4	4	1
How healthy is my infrastructure?				
Availability and performance	2	3	3	4
SLA compliance	1	1	1	4
Content delivery	4	1	1	1
Capacity and flash traffic	4	3	2	1
Impact of performance on outcomes	2	4	1	1
Traffic spikes from marketing efforts	3	4	1	1
Seasonal usage patterns	4	4	2	1
How am I doing against the competition?				
Site popularity and ranking	4	2	3	2
How people are finding my competiitors	3	4	2	1
Relative site performance	4	3	2	4
Competitor activity	1	3	1	3
Where are my risks?				
Trolling and spamming	3	3	4	1
Copyright and legal liability	1	1	3	1

Where are my risks?				
Fraud, privacy, and account sharing	1	3	1	4
What are people saying about me?				
Site reputation	4	1	4	1
Trends	4	3	1	1
Social network activity	4	1	3	1
How is my site and content being used elsewhere?				
API access and usage	4	3	4	2
Mashups, stolen content, and illegal syndication	4	2	3	1
Integration with legacy systems	1	3	1	4

[a] Key:

    1 Not Important
    2 Somewhat Important
    3 Very Important
    4 Primary Metric

Tailoring the Monitoring Mix to Media Sites

Media organizations care about the volume, loyalty, and interests of their visiting population, as well as the rates of click-through for advertising and their ability to cost-effectively handle traffic during peak load. They also watch the rest of the Internet for plagiarism and content theft, as well as incoming links from news aggregators that can foreshadow traffic spikes. Finally, they need to monitor comment threads for abusive behavior.

How Much Did Visitors Benefit My Business?

Primary metrics: click-outs; subscriptions

A visitor helps a media site by clicking on advertising, which generates revenue. If you have a premium subscription model, this is a second source of income, although you should treat the part of your site that converts users from "free" to "subscription" models as a transactional site.

This is especially important when comparing your own web analytics with those of advertisers or sponsors who owe you money.

Where Is My Traffic Coming from?

Primary metric: inbound links from social sites and search engines

Secondary metrics: referring URLs; visitor motivation

Since the site's job is to deliver content to others, it's important to reconcile where someone came from, her demographics, and where she went. This allows you to identify segments of visitors who are more likely to click on ads, so you can focus on attracting those segments.

On media sites, traffic will spike when news breaks or when content becomes popular. When this happens, it's important to identify the referring organization or social network that started the traffic and to encourage additional upvoting by the members of that network to make the most of your short-lived visibility. You also need to look at what was on visitors' minds that caused them to visit, which you can collect through VOC surveys.

Since many visitors to media sites arrive in search of some content—a recent TV clip, an interview with a celebrity—the search systems by which they find that content are important to track.

What's Working Best (and Worst)?

Primary metrics: findability and search effectiveness; content popularity

Secondary metrics: site effectiveness; community rankings and rewards

Media sites are all about content. To maximize visits, it's important to show visitors content that will grab their interest or is related to what they initially came for, so that they stay on the site longer and see more ads. To lower your bounce rate, it's essential to track which content is most popular and display it prominently on landing pages.

A lesser but still important concern is community ranking. In many cases, you will allow your visitors to rate and rank content. This is vital not only for identifying popular media and encouraging people to enroll in order to vote, but also for harnessing the wisdom of the crowds in flagging inappropriate material.

How Good Is My Relationship with My Users?

Primary metrics: loyalty; enrollment

Secondary metric: reach

The Web is increasingly dependent on permission-based marketing. Occasional visitors benefit you when they become loyal, returning subscribers or enroll via a mailing list or RSS feed, as this makes the site more attractive to advertisers. The number of people who have given you permission to communicate with them is a critical metric for media sites.

However, you can't just measure how many people have enrolled in your mailing list or subscribed to your RSS feed. You need to track your reach—the number of subscribers who act on what you send them by clicking on a link or returning to your site

How Healthy Is My Infrastructure?

Primary metrics: content delivery; capacity and flash traffic; seasonal usage patterns

Secondary metrics: availability and performance; impact of performance on outcomes; traffic spikes from marketing efforts

While all web operators need to know their sites are working properly, media site operators care about specific aspects of availability and performance.

Your site will often be a reference that's cited by others. If your site's content is updated often, you need to be sure caching is properly configured and data isn't stale, so that news gets out to returning visitors. You also need to keep archives available if you continue to be an authoritative source for other sites that link to your content.

Your site needs to load quickly, particularly for new visitors who aren't sure you have what they want. Returning users might tolerate occasional latency, particularly if they know they're going to get what they're looking for, but a first-time visitor won't. This is where internal service level targets and comparative synthetic test results are useful.

Performance and availability aren't just about delivering your pages to users. They're also about making sure ads and rich media reach visitors. Many ad networks do this for you by embedding one-pixel images before and after ads to confirm that they were properly displayed. For rich media such as video or interactive advertising, you may need to track other metrics, such as rollover and playback progress.

How Am I Doing Against the Competition?

Primary metrics: site popularity and ranking; relative site performance

Secondary metrics: how people are finding competitors; visitor motivations; brand recognition in surveys

Web users can get their news from many places. Knowing how you're doing against other sites that cover your news or offer similar media is an essential business metric, but one that only shows you how you're doing—not the cause of differences in popularity between your site and your competitors'.

This difference might be due to site performance—faster sites can lead to more active visitors. It may be because of your relative ranking in search engines. Or it may be that your competitors' brand awareness and engagement are leading potential visitors to them instead of you (or vice versa).

You also need to look at how people are finding your competitors. Certain keywords may be useful for you to start bidding on as well, in order to take a share of their market. You can also gauge the effectiveness of your brand.

Where Are My Risks?

Secondary metric: trolling and spamming

Media sites publish content they create. When reusing content, however, they need to be sure copyrights and terms of use are respected. Since most of the content is their own, copyright is less of an issue than it is for collaborative websites.

But the modern media site is a dialogue between visitors and content creators. These sites give visitors places to comment and respond. As a result, many popular media sites are plagued by comment spammers and trolls looking for a fight. If you're running such a website, you need to track problem users and quickly remove offensive content (or let the community do it for you) even as you strive to make it easy for your visitors to join the conversation.

What Are People Saying About Me?

Primary metrics: site reputation; trends

Media sites get visitors based on their reputations, which includes how well search engines trust their content and how well-known their brands are. If your media site is particularly topical, knowing which trends and topics are on the rise is also important if you want to stay relevant to your audience and adjust your coverage accordingly.

How Are My Site and Content Being Used Elsewhere?

Primary metrics: API access and usage; mashups, stolen content, and illegal syndication; traffic volume in bytes sent; top URLs in logfiles

If you're seeing huge amounts of outbound traffic but relatively few site visits, it's a clear sign that someone is embedding your media into a web page without your approval. This is a common form of illegal content syndication; it's bad for your media site because you don't get to show (and get paid for) the accompanying advertising.

If you're running a media site, you need to watch traffic levels to see who's putting your content elsewhere on the Net. When content becomes popular on a social network site, it's common for spammers to submit a second copy of the story, which links through to their sites first so that they can benefit from some of the traffic—a practice known as *linkjacking* (see Figure A-1).
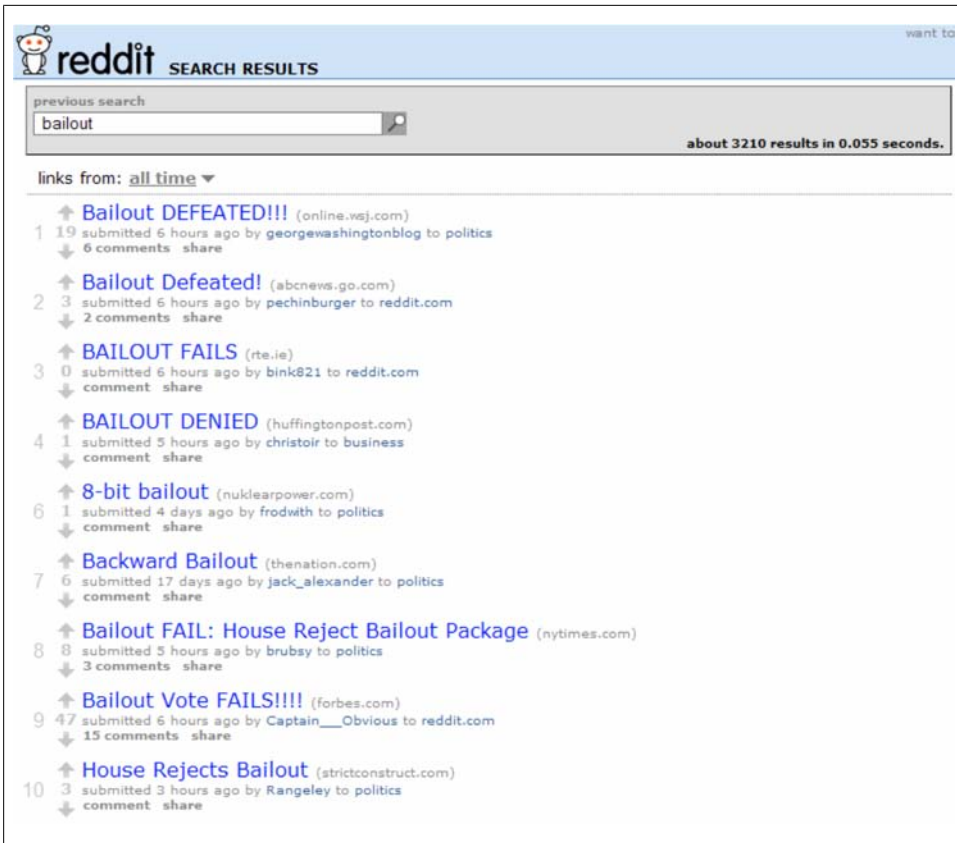
Figure A-1. Linkjacking on reddit

Sometimes this second submission can even outstrip the original one. If you watch social news aggregators when your content first becomes popular, you can often detect this and report it to the site's operators—though the best defense is to make it easy for people to upvote your authentic copy of the content through better site design so your original story rises to the top.

You should also search the Web for strings of text within your popular articles to see if others are reprinting them as their own.

Tailoring the Monitoring Mix to Transactional Sites

Transactional sites make their money from outcomes. These might be subscriptions, purchases, or enrollments—whatever the case, the company's revenues are directly driven by the percentage of visitors who complete a particular process.

How Much Did Visitors Benefit My Business?

Primary metric: conversion and abandonment

Secondary metric: offline activity

If you're running a transactional site, you need to constantly compare different site designs, offers, and pricing strategies to find the ones that have the highest conversion rates. Page views mean nothing unless you can turn visitors into buyers.

If the end of your transaction happens offline—talking to a sales rep, getting contact information from a site, or starting an online chat—treat this as your goal and try to tie the online portion of the transaction to its offline outcome. At a minimum, provide a unique phone number on the website and track call volumes to that number.

Where Is My Traffic Coming from, and Why?

Primary metrics: referring URLs; visitor motivation; traffic volume by segment

Secondary metric: inbound links from social tools

The second big question for transactional sites is how many visitors come from where. You get and pay for your business by understanding which search terms, campaigns, social networks, and referring sites have the highest conversion rates. You should also understand *why* visitors come to your site so you can be sure you're satisfying their needs and putting appropriate offers in front of them. VOC surveys can reveal visitor motivations.

When looking at advertising, distinguish qualified from unqualified visitors. If you sell cars, young children who visit the site aren't likely to be buyers and will reduce the ROI of your ad campaigns. Consequently, you need to eliminate unqualified leads from your conversion analysis and adjust your advertising spend to ensure that such leads don't poison otherwise healthy conversion numbers.

What's Working Best (and Worst)?

Primary metrics: site effectiveness; ad and campaign effectiveness; usability

Secondary metrics: findability and search effectiveness; content popularity; community ranking and rewards

When you're monitoring conversions and segmenting traffic, you need to focus on site effectiveness. Transactional sites thrive by upselling visitors. As more and more users buy through onsite search tools, it's also important to monitor the effectiveness of searches and determine which search terms lead to purchases most often. The key to maximizing site effectiveness is constant experimentation in the form of A/B testing and multivariate analysis.

Since peer recommendations ("Other people who bought this also bought…") are one of the strongest influences on purchase upselling, it's also critical to monitor the user community for comments, ratings, and other feedback, and to borrow a page from collaborative sites by encouraging visitors to comment and recommend products.

Finally, you need to look at usability: examining how users interact with the site, particularly at places where abandonment occurs, is essential if you're going to improve usability. Do users scroll down? Does your offer appear above the fold? Do buyers click on the button or the text? Does the page take a long time to load? All of these factors can impact how effectively you maximize each visit.

How Good Is My Relationship with My Users?

Primary metric: reach

Secondary metrics: enrollment; loyalty

Transactional site operators care about their ability to send messages to their users and have them act on those messages. Email campaigns, RSS feeds of promotions, and similar forms of enrollment are all useful, but they only count when someone clicks on the link.

You also want to know the lifetime value of a customer. You may find that a particular segment of the market purchases considerably more over months or years, and it's wise to cater to that segment in your marketing, positioning, and offers. As retailers move away from broadcast and toward community marketing, enrollment and loyalty may overtake reach as the key measurement of relationship strength.

How Healthy Is My Infrastructure?

Primary metrics: impact of performance on outcomes; traffic spikes from marketing efforts; seasonal usage patterns; consistency of performance and availability

Secondary metrics: availability and performance; capacity and flash traffic

Transactional site operators care about performance primarily for the way in which it affects conversion. If performance degrades, conversion rates will fall. The site may be slow because of sudden spikes in traffic, peak seasonal periods (such as holiday shopping), content changes, or modifications to code and infrastructure.

Of particular interest is the impact of marketing campaigns on performance. Your marketing efforts must be tightly tied to capacity planning and performance monitoring to ensure that a successful marketing campaign doesn't backfire and break your infrastructure.

How Am I Doing Against the Competition?

Primary metric: how people are finding competitors

Secondary metrics: site popularity and ranking; relative site performance; competitor activity

If you're running a transactional site, you care how people are finding your competitors, and how they can find you instead. This is often a battle of keywords and search terms, and in terms of organic search it is also a matter of how relevant Google and others think you are.

You also care whether you're fast enough. It's not necessary to be as fast as possible, but you should compare your performance to relevant industry indexes to ensure you're not falling behind what users consider acceptable. On the Web, your competition may not be who you think it is. In addition to other sites that offer the same products and services, you're competing against the expectations set by other websites your target market frequents. If those sites constantly improve and innovate while you don't change, your audience will eventually grow disenchanted, even if those sites don't compete with you in the traditional sense.

Where Are My Risks?

Secondary metrics: trolling and spamming; fraud, privacy, and account sharing

For transactional sites, most risks come from password and credit card leaks, which are a matter for your security team. But if you're letting visitors rate and rank products, you need to be on the lookout for abusive behavior. For example, in an effort to improve the quality of ratings, Apple's App Store chose to limit reviews to only those visitors who had purchased an application (*www.alleyinsider.com/2008/9/apple-flexes-even-more-muscle-at-the-iphone-app-store-no-reviews-till-you-pay-up-aapl-*).

You may also care about account sharing—if multiple users, all with unique tastes, share one account, your suggestions and recommendations will be less accurate and will undermine upselling attempts.

What Are People Saying About Me?

Secondary metric: site reputation

Your site's reputation figures in both word of mouth and search engine ratings. But as a transactional site operator, you care mostly about which online conversations are leading to conversions, rather than reputation for its own sake.

How Are My Site and Content Being Used Elsewhere?

Secondary metrics: API access and usage; mashups, stolen content, and illegal syndication; integration with legacy systems

If you're running a transactional site, you care less about your content being used elsewhere, particularly if it helps spread the word about your products and your brand. Travel site Kayak.com, for example, compares flight prices across many airline portals, but it makes its money through affiliate fees from the airlines from which the visitors ultimately buy tickets.

On the other hand, if somebody is scraping pricing data from your site for price comparisons, it can undercut your margins and lead to price wars, so you need to identify hostile crawlers that harvest content from your site. You can then set up a *robots.txt* file to block well-behaved crawlers from those parts of the site, then identify those that ignore it and block them by user agent, source IP address, or a CAPTCHA test.

If your transactional site is a large-scale marketplace, you may have an ecosystem of buyers and sellers who've built tools around your application. There are hundreds of tools for eBay sellers, for example. You need to monitor these interactions so you don't alienate power users, but also so they don't violate terms of service.

If you're selling online, you may also have backend connections to payment systems (such as PayPal) that need to be monitored as part of the overall site health.

Tailoring the Monitoring Mix to Collaborative Sites

If you're running a collaboration site, you want to be sure users engage with your application; create, edit, and rank content; and spread the word. You also want to mitigate bad content and stop users from disengaging.

You're in a unique position: compared with a transactional or media site operator, you have much less control over your destiny. You're dependent on your visitors and your community to generate content and build buzz. You also need to walk a fine line between rewarding a few extremely active participants and making sure that content is open and democratic.

How Much Did Visitors Benefit My Business?

Secondary metrics: click-outs; subscriptions

While the advertising side of your collaborative site is run like a media business, from a collaboration standpoint you care about users that are creating content, whether through uploads, writing, ranking, or editing. You also care whether this content is valuable—are others reading it?

A second factor is how much users are engaging with the site. Do they track comments on items they've created? Are they building social networks within the site and rating one another?

On many collaborative sites, a small population of users will generate the majority of content. This can actually be a liability for site operators: a big attraction for collaborative sites is that they harness the long tail of public opinion and provide more targeted content than the mainstream media. Sometimes, the focus on the long tail has casualties. On September 24, 2008, Digg announced that as part of its new financing it would be banning its biggest users, saying it could "not have the same 1 percent of users generating 32 percent of visits" to the company's site (*http://socializingdigg.word press.com/2008/09/24/diggs-new-biz-model-ban-top-users-and-hit-300m/*).

Also, because much of the growth of collaborative sites comes from invites, you should treat invitations as a form of conversion. Facebook, for example, lets users share their content with friends who don't have Facebook accounts. Those invited friends can see the shared content immediately, but must sign up when they try to browse elsewhere on the site.

Where Is My Traffic Coming from?

Secondary metrics: referring URLs; inbound links from social tools; visitor motivation

As the operator of a collaboration site, you care less about where visitors are coming from than the operator of a transactional site might. But knowing about the social groups and referring sites helps you to tailor content to their interests. Similarly, visitor surveys can reveal why people are coming to the site and what other collaborative sites they frequent.

What's Working Best (and Worst)?

Primary metrics: content popularity; usability; community ranking and rewards

Secondary metrics: site effectiveness; findability and search effectiveness; trouble ticketing and escalation; user productivity

This is the most important set of metrics for a collaborative site. With so much riding on your visitors, your site has to be usable and it must be easy for visitors to find and rate popular content. You need to reward active contributors and make them feel a part of the community, showcasing their work. Also, find out what causes visitors to invite their friends, and make it easy for them to do so and for their friends to get immediate gratification from the invitation.

Your site won't succeed if there are a large number of complaints and problems that make it hard for users to create. You also want the collaboration site to become a reference for users. After all, you'll eventually make your money by turning the content

your users provide into media to which you can attach advertising, so the site must be searchable and properly indexed.

If you're using a wiki model, you need to track incipient links—essentially, links to pages that haven't yet been created. If a page has too few incipient links on it, it's an orphan. If it has too many, related material hasn't yet been created. You should identify incipient links that are frequently clicked by visitors and flag them so that their destination pages are the next to be created.

How Good Is My Relationship with My Users?

Primary metric: reach

Secondary metrics: loyalty; enrollment

You need contributors to keep coming back. Informing them that others are interacting with their content—essentially giving your contributors their own analytics—is one way to accomplish this, as are updates and friend feeds. For all of these to work, you need permission to contact your visitors via email or RSS feeds, and you need them to follow the links you send them. As a result, you need to track reach, loyalty, and enrollment and encourage users to engage with the community to maximize collaboration.

How Healthy Is My Infrastructure?

Secondary metrics: availability and performance; capacity and flash traffic; seasonal usage patterns

Collaboration sites may experience sudden growth, particularly when viral marketing kicks in. Slideshow producer Animoto, for example, went from 25,000 to 250,000 users in three days.[*] While availability and performance should always be monitored, your primary concern is that they do not interfere with collaboration and that you can quickly detect growth in traffic so your systems engineers know to add capacity.

How Am I Doing Against the Competition?

Secondary metrics: site popularity and ranking; how people are finding my competitors; relative site performance

Competition isn't as important with collaboration sites as attention is. Because the long-term goal is to make money on media contributed by others, however, you do need to track your site ranking to be sure that the content your users are creating is relevant to advertisers and is gaining the attention of search engines. How are Internet

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[*] *http://mashraqi.com/labels/animoto.html*. For a more detailed look at Animoto's use of elastic computing resources, see Werner Vogels' presentation on Amazon Web Services at *http://www.cca08.org/files/slides/w _vogel.pdf*.

users finding out about topics you cover? Can you better mark your pages so they get the attention of search engines and you rise above competitors in organic search?

Where Are My Risks?

Primary metric: trolling and spamming

Secondary metrics: copyright and legal liability

The biggest risks for a collaboration site are bad content and the addition of illegal, inappropriate, or copyrighted material to the site. Trolls will deter visitors from returning, and spammy content will reduce the value of the site in the eyes of both users and search engines.

You also need to watch how quickly content is rejected, which can be a sign of abusive behavior or an attempt by spammers to downvote other users' content in order to bring theirs to the forefront.

Depending on the type of collaboration site you're running, you may need to monitor for illegal uploads. If users post content that could expose your site to litigation, you must be able to demonstrate effective tools for flagging the content, investigating it, and removing it quickly. Such actions need to be backed by terms of use and community management policies.

What Are People Saying About Me?

Primary metric: site reputation

Secondary metric: social network activity

Your site's reputation in the eyes of both search engines and users is key. In the early stages of a collaborative application, you need to watch social networks to track buzz and manage complaints by addressing user concerns. Because your site is so dependent on the contributions of others, its ranking and the attention it receives from microblogs and news aggregators can make or break you.

If you're focused on a specific segment of the Internet, you need to be sure you're reaching that community directly. Imagine you have a website where people contribute plans for paper airplanes: are aeronautical engineers discussing you? How about paper companies? Science teachers? Where can you go to find them?

How Are My Site and Content Being Used Elsewhere?

Primary metric: API access and usage

Secondary metric: mashups, stolen content, and illegal syndication

Your content, and that which your users create, is valuable. If it winds up on others' sites without you being able to insert advertising, you'll never make money from the

community you're nurturing. At the very least, content should be attributed to you so you'll rise in search engine rankings and gain visibility. So you need to watch APIs and automated retrieval of content, particularly the embedding of rich media for acceptable use.

Many multimedia collaboration sites embed their advertising directly into the media as preroll messages, interstitial advertising, or overlaid logos that link users back to the site itself. This is one of the main attractions of Flash- or Silverlight-based encoding of video and audio. If you're using this approach, you don't mind that others embed your content in their sites as long as you tie your rich media content back to your analytics systems so you can see when it's played elsewhere.

Tailoring the Monitoring Mix to SaaS Sites

SaaS companies want to replace desktop software. Their products must be at least as fast and as dependable, and ideally more convenient than the desktop alternatives they're replacing. They should also offer features, such as sharing and group scheduling, that aren't easily available on standalone desktop applications. So most of the metrics a SaaS provider cares about focus on performance, usability, and end user productivity.

How Much Did Visitors Benefit My Business?

Primary metric: billing and account use

Secondary metrics: conversion and abandonment; offline activity

SaaS companies make money when subscribers pay for access to the application. Monthly billing is based on the number of users and seats, and should be the basis for revenue reporting. Usually, this kind of accounting is done within the application itself and tied back to payment systems directly.

You should view the parts of your site that sign up new subscribers or convert free users to paid services as a transactional site using traditional conversion-and-abandonment monitoring.

The interaction your subscribers have with your helpdesk, however, needs to be tracked because it is a direct reflection of performance, availability, and usability issues with the SaaS site itself. Helpdesk calls are negative outcomes that need to be traced back to the pages, processes, or outages that caused them.

Where Is My Traffic Coming from?

No primary or secondary metrics

Traffic sources aren't particularly important to a SaaS provider, with one exception. You may care how many users are accessing the application from home (rather than from an office) or from a nonstandard device (like an iPhone instead of a PC). Tracking

this kind of data can warn you about usage patterns you may need to address in future releases, such as stronger privacy for home PCs or a different resolution for mobile devices.

Of course, the part of a SaaS provider that tries to attract customers cares a lot about traffic sources, but it's a transactional site, not a SaaS site.

What's Working Best (and Worst)?

Primary metrics: trouble ticketing and escalation; user productivity

Secondary metric: usability

Everything on your SaaS application ties back to productivity. If users are more productive with the hosted application than they were with a desktop alternative, your business subscribers will be happy.

Tracking productivity metrics is key. Identify which actions are at the core of your application—filing an expense report, sending a client an estimate, looking up a contact, and so on—and track them ruthlessly.

Every time a user's session goes to a helpdesk, you should flag that session and be able to replay it. If the problem was a user error, you need to fix the page and make it more usable. If it was a technical error, the steps needed to reproduce it will have been captured and you can add them to your testing of future releases.

You also care whether users are embracing new features and enhancements. If they're only using a subset of the functionality you offer, you may find yourself competing against other services simply because your customers aren't aware of your entire product.

How Good Is My Relationship with My Users?

No primary or secondary metrics

Your subscribers pay to use the application. You aren't as concerned with engagement or reach as you would be with other types of site, though you do care about bounced mails if email notification is an important part of your application.

For most SaaS firms, customer relationships are a sales issue, but you need to arm the sales force with salient data about the customers' experiences with the site so they can sell and renew subscriptions.

How Healthy Is My Infrastructure?

Primary metrics: availability and performance; SLA compliance

Infrastructure health is especially important for SaaS companies. Not only do you need to be as fast as an in-house alternative, you may have to offer refunds to customers if

you fail to meet SLA targets. If you're unable to deliver the application to users, you need to know why. Was it the network or the application? Is network delay due to large pages or poor networks?

SaaS companies are some of the strongest adopters of End User Experience Management (EUEM) technology because they need to end the finger-pointing that typically accompanies service outages. Knowing what's your fault and what's your subscribers' fault can mean the difference between cutting a belligerent customer a refund check and finally getting him to admit that he was wrong.

Because SaaS application use is often part of the workday, you also need to know daily usage patterns by time zone. As different parts of the world wake up and use your application, you'll see different spikes: logins in the morning, reporting in the afternoon, and a lull before night owls access the application from home. You need to ensure that you can handle this rolling traffic across the day and detect any changes that might signal a problem before it interferes with your SLAs.

How Am I Doing Against the Competition?

Primary metric: relative site performance

Secondary metrics: competitor activity; site popularity and ranking

While it's important to know how you're faring against the competition in any industry, you care a lot less about social networks and search engine rankings in your operation of the SaaS application itself. Search engine rankings are, of course, important to your acquisition of new customers, but that process is treated as a transactional site.

When it comes to the SaaS portal, you should look at industry indexes or tests of your competitors to ensure that your performance is on par with the industry. Are your competitors using content delivery networks to reach far corners of the Internet? Have they embraced on-demand infrastructure in an effort to scale? Are they paying a premium for high-end managed hosting or faster broadband connections?

Where Are My Risks?

Primary metric: fraud, privacy, and account sharing

When you're running an application, your main fraud concerns are about protecting your customers' data. You're responsible for private financial information that may be subject to specific legislation—HIPAA for healthcare, PCI for credit card transactions, OSHA for human resources, and so on. And this legislation may affect what you're allowed to collect and monitor, and who has access to that monitoring data.

Be particularly careful around account management and termination. Since your customer is the enterprise that subscribes to the SaaS application, but your end user is the employee, you may have to remove employees from the system when they leave the company. SaaS applications need much more powerful on-demand forensics to manage

user accounts and assist with security investigations when employees defraud their employers.

One other area of concern for SaaS companies is account sharing. If you generate revenue per subscriber, you need to monitor account usage to detect when several people are sharing a single account.

What Are People Saying About Me?

No primary or secondary metrics

As a SaaS provider, you don't care much about what the Internet thinks of you. Your sales department may, but as the operator of the application itself, most of your attention is turned inward or toward your customers.

How Are My Site and Content Being Used Elsewhere?

Primary metric: integration with legacy systems

Secondary metric: API access and usage

The main concern for SaaS companies is how their hosted applications integrate with the enterprise's in-house data. You may have to monitor communications with your customers' CRM, HR information, or Enterprise Requirements Planning (ERP) systems. This means monitoring a variety of APIs, some of which will be based on older protocols, to ensure that the application works properly. For example, a login process on your hosted application may need to talk with a company's LDAP server or an OpenID service to verify users. Any slowdown in that connection will affect the login process on the site, so it needs to be part of your monitoring strategy.