

New vs Returning Visitor (%)

The percentage composition of new and returning visitors is a [key performance indicator](#) (KPI) used in the [e-commerce](#) environment. It indicates the customer retention related to a certain Internet presence in a specific period of time. The main question to be answered in this context is, “how often are new people visiting your site versus those which return periodically”.¹⁾ If the number of new visitors at the rate of returning ones increases, an advertising campaign in a new target market was successful. Hence, the KPI makes it possible to understand the effectiveness of those campaigns. [Web analytics](#) helps to measure visitor’s engagement on a website.

Functional Principle

The KPI can be calculated by dividing the number of new visitors by the number of unique visits and multiplying the result with one hundred. Thereby, a new visitor is defined as the first access of a particular [web browser](#) to an Internet presence. Returning visitors can be described as a repeated access for one or more times.²⁾

Usually, new and returning visitors of an Internet presence are detected via a [cookie](#). If a visitor's web browser saved a cookie from a previous visit, the user will counted as a returning visitor in case of the next visit. Otherwise the visitor will be handled as a new one. For example, the Google analytics system sets a cookie called utma.³⁾ The cookie stores website domain (as hashed data), unique visitor id, timestamp of first visit, timestamp of previous (most recent) visit, timestamp of current visit and the visit count.⁴⁾ The cookie is valid for 24 months by default.⁵⁾

Interpretation

To analyze statistic data, it is required to know its framework and how the data were levied. The period of measurement is also important to interpret this KPI, as the following example shows: visitor Alice accesses a specific website every day, the visitor Bob once a week and visitor Charly accesses it once a month. Is the period of measurement:

- one month, the result shows three new and two returning visitors,
- one week, the result shows nine new and four returning visitors,
- one day, the result shows 35 new and zero returning visitors.

period of measurement	Alice		Bob		Charly		Monthly Stats			
	new	returning	new	returning	new	returning	new	returning	unique visits	new vs returning visitors %
monthly	1	1	1	1	1	0	3	2	5	60
weekly	4	4	4	0	1	0	9	4	13	69
dayly	30	0	4	0	1	0	35	0	35	1

(Table 1: example monthly stats (4 weeks, 30 days))

Possible uncertainties

Meanwhile, the differentiation between unique new and returning visitors is difficult. A lot of people use more than one computer, e.g. a private portable computer, a business computer, a mobile phone, a tablet computer, a television with web browsing function, a game console and maybe a kitchen computer or different browsers because of a new function or a better look-and-feel. Every access with another device or browser is registered as a new visitor. Furthermore, the protection of privacy also gains in importance. More and more people install browser plug-ins to use integrated browser privacy functions or apply software to delete cookies or other tracking data periodically. Thus, it is not possible to detect a returning visitor unless the Internet presence uses a user log-in to view the content.

Conclusion

The percentage composition of new and returning visitors is a useful KPI to validate approximately the impact of an advertising campaign or other marketing tools. Moreover, it points out whether visitors return to a certain internet presence or not. But obviously, difficulties in data collection grow bigger because of consumer behavior or privacy options and any interpretation should include this aggravation.

Other KPI's

- [Average Order Value](#)
- [Customer Retention Rate](#)
- [Days To Purchase](#)
- [Items Per Order](#)
- [Order Conversion Rate](#)
- [Time Per Visit](#)
- [Visits To Purchase](#)

1)

Prestipino, Peter A. "Avant-Garde E-Commerce KPI's." *Website Magazine*. Susan Whitehurst, 21 Dec. 2009. Web. 6 May 2012 [Link](#).

2)

Google Inc. "Google Analytics - Dimensions and Metrics Dictionary." *Google Support*. Google Inc., 2012. Web. 5 May 2012. [Link](#).

3)

Ibidem.

4)

ShoreTel. "Utma Cookie - Whats in It?" Newsgroup. *Analytics Help Forum Archive*. Google Inc., 10 Apr. 2008. Web. 5 May 2012. [Link](#).

5)

Habermann, Moritz. "Google Analytics: Default-Cookie-Einstellungen Und Wie Man Sie Verändert." Web log post. *BlogZwoNull*. Moritz Habermann, 24 Aug. 2009. Web. 5 May 2012. [Link](#).

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