

P2Rx Web Site Measures

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BACKGROUND:

The web measures Standard provides guidance to P2Rx Regional Pollution Prevention Information Centers regarding web site performance data which should be collected in order to facilitate effective aggregate measurement and management of web site activity.

RATIONALE:

There is an increasing emphasis within EPA and other governmental agencies on the use of objective numerical measures of program effectiveness. This trend has been brought about by (among other factors) the Government Performance and Results Act (GPRA). In response to this need for objective metrics, the P2Rx group has developed a standard for web site measurement that can be adopted by all participating Centers. This standard supports compliance with the GPRA by providing common reporting criteria that will facilitate aggregation of consistent web site statistics from participating regional Centers.

It is important to note the limitations of data that can be obtained from website measures. First, web activity does not inform the center about what type of user is at the website (the intermediate user of information, or the end-user) Nor can it be determined if information is affecting a change in user attitudes. Short and intermediate-term outcomes (as specified in the logic model; included in the appendix of this standard) cannot be measured by web activity according to the PPIN-evaluation, "Evaluating the Effectiveness of the EPA Pollution Prevention Information Network Grant Program," conducted by Abt and Associates in May 2008.

http://p2rx.org/admininfo/2008_survey_results/FINAL%20PPIN%20Evaluation%20Report_August8.pdf. However, according to the same study (pages 67-68) web measures can be used to define Center outputs and customers.

Web activity logs (sometimes referred to as web trends) give some indication of traffic and may be used with other data to indicate a trend in web use. However, these numbers are frequently misleading and should not be used as an absolute measure of a product. There is no established standard for measuring visitors to a site. Furthermore, visitor logs do not indicate if the person visiting used the information, or if the information was used to forward the goals of the P2Rx. Establishing a link between a web activity "visit" and actual use of the data cannot be established through web logs. In summary, web activity logs give a general idea of how the website is used. They can indicate trends, which may provide clues about use when combined with user surveys and other customer interactions to determine the use of the product.

Therefore, the centers are agreeing to report total page views and total user sessions semiannually, recognizing the following points:

- 1) Web activity provides some relative information but it is not definitive. Given the way information flows move on the web, with syndication and shared content, it is impossible to accurately know complete web activity.
- 2) Any web numbers published must include a caveat about their limited usefulness.
- 3) The previous web standard, where centers try to determine activity for different P2Rx products is too time-consuming, given the "noise" in the data, which limits its absolute value.

- 4) Centers' internal web activity and that of search engines plus sites that pick up the P2Rx news, for example, creates some web activity that does not necessarily indicate external use. Centers cannot know the extent to which this is happening without time-consuming investigation of web logs. Given the potential value of knowing this information, Centers are not going to spend that time. Therefore, there is no requirement for the web activity analysis software to filter out search engine spiders or internal use.
- 5) Some centers look at "top pages" as a way to know what is being viewed on their site, for internal purposes. This information is not relevant across all centers, though, because of the directory structure of each center. Therefore, there is no requirement to report "top pages."
- 6) The centralization of P2Rx topic hubs changes individual center's ability to know topic hub usage from their site, or even usage of topic hubs they authored. Therefore, there is no requirement to report Topic Hub use.
- 7) Each center is free to use whatever web analysis software (free or purchased) works for their specific situation. The name of the software used should be reported along with the page views and user sessions.

Some Centers have a "static feedback" link, where users can take a short survey. Some centers have a "pop-up" that asks a question of the users. In both cases, the user is asked if they are going to use the information for themselves or for to pass on to someone else. This identifies the user as a "final" user or "intermediate" user, according to the logic model (see appendix). Centers that have this capability should report the number of users in each category in each reporting period. It is important to note that the "static feedback" page is simply a link from the website, and has historically low usage. In addition to reporting the aggregated numbers of final and intermediate users, Centers will report the percentage of intermediate and final users based upon the total number of users who identified themselves. For example, if a center finds that from the pop-up question plus the static feedback page, they have 78 final users and 98 intermediate users (176 total identified users), they report 78 final users, which equates to 44% final users and 98 intermediate users, which equates to 56% intermediate users.

The pop-up question is associated with a "cookie" for the user's computer, so that a user is only asked the question once. If users have pop-ups blocked, the question may never appear to a user. Whether the user answers the question or closes the window the first time it appears, it will not appear again unless the user clears their cookies on their computer. Most centers do not know how many times the pop-up is shown, only the number of responses. Given these limits, it is still useful to report the number of users who are final users of information and the number who are intermediate users of information. Knowledge of whether users are intermediate or final users of information informs the Centers as to the kinds of products and services to supply and the expected outcomes.

This proposed standard is accompanied by the following caveat: It is recognized that each regional information Center is unique in terms of audience served, maturity of program, information model, and a number of other factors. These differences make direct comparison of Centers based solely or primarily on their web site statistics of questionable value. The primary intent of this standard is to facilitate aggregate performance reporting of all Centers and to provide management information to Center directors.

P2Rx AGGREGATE MEASURES

Each P2Rx Center should collect the following information semiannually about the use of its web site. This information will be aggregated by the National Coordinator on a P2Rx-wide basis every six months. The National Coordinator will report aggregated numbers. All reports shall include the caveat, "the P2Rx centers provide services and engage in many interdependent activities that are funded through the P2Rx grant and other leveraged fund sources. The activity and web measures identified in this report are wholly or partially funded by the P2Rx grant." Measures should be limited to PPIN-funded and match for PPIN-funded work.

Number of User Sessions (sometimes called "Visits")

User sessions are defined as the number of unique users who visited a web site during a certain time window. The time window is defined as a period of time beginning with the first “hit” to the web site from a given user, and ending after a predetermined time interval has passed without additional activity. Typically, the length of this time interval is 30 minutes. For purposes of aggregate reporting by the Regional Centers, the 30 minute interval should be used unless specific conditions suggest otherwise. Any Center which uses a different time interval should note this as a footnote to their user session statistics.

Number of Page Impressions or Page Views

Page impressions are normally defined as a “GET” request for a HTML document – e.g., only the main document requests, excluding requests for graphics files or other supporting files. The intent of this metric is to provide a more meaningful measurement of total pages viewed than the number of “hits” to the web site. For the purposes of aggregate reporting by the Regional Centers, page impressions should include requests for any document file, including Portable Document Format (.pdf) files.

Number of Final and Intermediate users

This measure is aggregated by each center semiannually. It is the sum of the number of responses from the “pop-up” question and the “static feedback” questions. Final users are those who will “use the information to assist my business, organization, facility, or agency.” Intermediate users are those who will “use the information to provide assistance to another business, organization, facility, or agency.” Reports should be limited to the number of “known users” that capture the percentage of users who indicated their status rather than the total number of users. Because of pop-up blockers and the appearance of pop-ups after the user takes action to navigate off the home page, the inclusion of the “don’t ask” users in the denominator dilutes the number of final users; consequently they should not be used.

ADDITIONAL COMMENTS ON STANDARD MEASUREMENTS

P2Rx recognizes our differences, and each Center will strive to gather the best data possible given its software, access to log files, etc. Each Center will probably collect additional web measurement data individually. The web development subgroup has suggested additional measures (below) that each Center might find illuminating.

SUGGESTED SUPPLEMENTAL WEB MEASURES FOR A REGIONAL CENTER

In addition to the standard aggregate measures of web site use, the web development subgroup suggests that each Center might find the following measures helpful in managing its web site. These metrics are not required, but participating Centers are strongly urged to consider their use. Many of the web subgroup members are already working to collect this information about the use of their own web sites.

Top 10-50 Pages Requested or Files Downloaded (# TBD by each Center). This is a simple measurement of which resources (documents) on your site are most useful to your users.

Percent Error Rate on Requested Hits. This measurement is derived from the web log by measuring all requests for information that result in an error code (e.g., a “404-Page Not Found error”). This is a useful measure of overall site integrity and can often be useful as a tool for identifying outdated or incorrect links to a site.

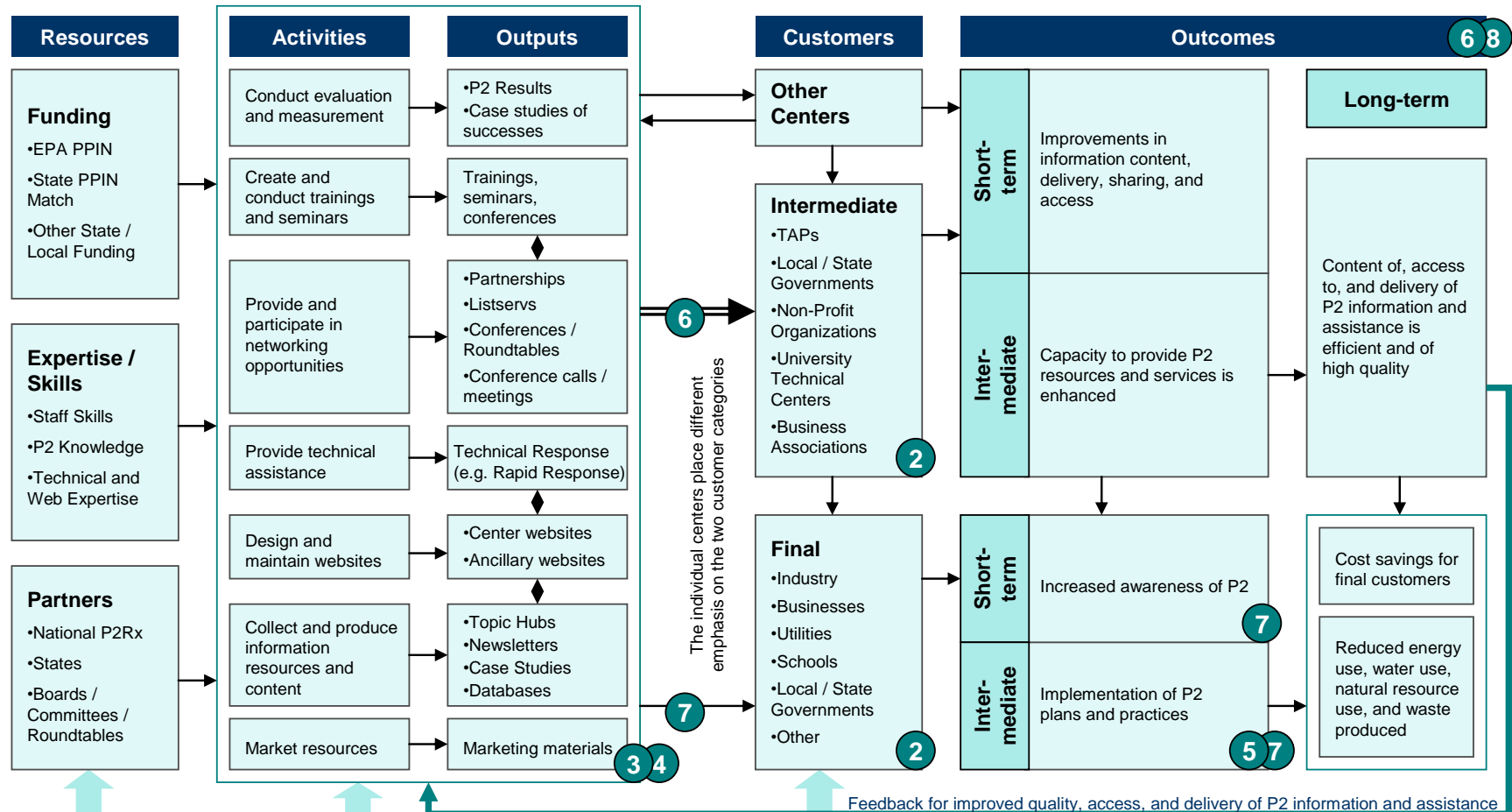
Number Repeat Visits. This is often an indirect measurement but seeks to determine the percentage of users who have visited your site previously. This is one indication of the value of the site to your users (based on the assumption that repeat visits indicate some degree of satisfaction with the site). Methods for determining repeat visits include the use of cookies, registration forms, or by indirect measurement of “Probable Repeat Visits”.

Top Referring Sites. A referring site is the web site URL last visited by the user prior to coming to your site. This can be a very useful measurement for determining how users are finding your site. Implementation of this metric will require the use of extended log format, including Referrer URL, by web servers.

Search engines as a % of total users. This is similar to the Referring sites measurement but focuses specifically on referrals from web search engines. This measurement is provided as an option on several of the commercial web log analysis applications.

Pollution Prevention Resource Exchange (P2Rx) Centers Program Logic Model—Information Dissemination 1

Mission: P2Rx is a national network of regional centers dedicated to improving the dissemination of pollution prevention information in the service provider community.



Resource Variation Highlights

Funding

- SRAP Grant—GLRPPR, NEWMOA, PPRC, Zero Waste

Partners

- Academia—GLRPPR, NEWMOA, P2RIC, Peaks, Zero Waste

Unique Center-Specific Highlights

Outputs

- P2 Tech Profiles, IT Tools—NEWMOA
- P2 Planner, Other Databases—Zero Waste
- Toolkits, Homes Across America—Peaks
- News, Podcasts—P2RIC
- Webinars—PPRC, WRPPN, Peaks
- Library—WRRC

Customer Variation Highlights

Intermediate

- Consultants—Peaks, PPRC

Final

- International—WRRC, GLRPPR, WRPPN, Zero Waste
- Tribes—GLRPPR, Peaks
- Military—Zero Waste

Legend:

- 1** Relevant Evaluation Question
- P2:** Pollution Prevention
- PPIN:** Pollution Prevention Information Network
- TAP:** Technical Assistance Provider