REL APPALACHIA
Regional Educational Laboratory

CNA
ANALYSIS & SOLUTIONS

# A Framework for Assessing Needs across Multiple States, Stakeholders, and Topic Areas

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## I. Introduction

Often, service providers respond to individual needs as they arise, which can result in disconnected and uncoordinated service delivery. By integrating needs assessment into the planning of services, providers can develop strategic and systematic responses to problems. Designing a regional needs assessment process that informs an organization's service delivery including technical assistance, research, and information dissemination is a challenging task.

This paper describes a framework involving six steps for assessing needs across multiple states, stakeholders, and topic areas for the Regional Educational Laboratory (REL) Appalachia (AP), funded by the Institute of Education Sciences. A description with examples of the purpose and process of each step shows how specific needs sensing activities fit within the context of REL AP's large-scale, ongoing regional needs assessment. Challenges and solutions for each step are offered and reflect lessons learned in the needs assessment process. By sharing challenges and solutions to the needs assessment process, the paper reveals the realities of translating a conceptual framework for needs assessment into practice.

## II. REL AP Background

REL AP is 1 of 10 RELs funded by the Institute of Education Sciences for a five-year contract, currently in Year 2. REL AP provides analytic technical assistance, research, and information dissemination to build educators' capacity for data use in three topic areas: college and career readiness, supporting effective teachers and leaders, and improving low achieving schools. It provides services to stakeholders in Kentucky, Tennessee, Virginia, and West Virginia. Stakeholders include local education agencies, state education agencies, REL AP Governing Board members, and research alliance members. The majority of REL AP's service delivery occurs within research alliances, which consist of groups of educators and other stakeholders focused on addressing a common problem through well-planned analytic technical assistance, research, and information dissemination. REL AP currently partners with five research alliances across the four-state region.

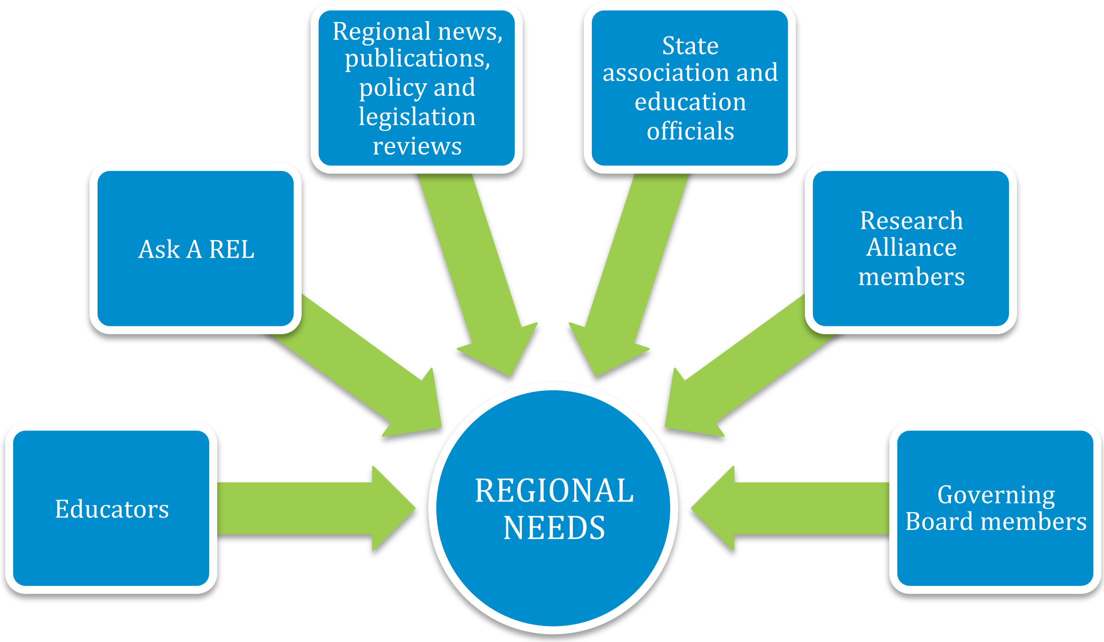
## III. REL AP's Regional Needs Assessment Process

As part of our requirements for needs assessment, REL AP must prepare several deliverables each calendar year, which also is the fiscal year for each REL. The primary deliverable is the Annual Assessment of Analytic Needs (AAAN), which is due early November of each year. This report summarizes needs assessment findings since January of each year and presents recommendations for responding to identified needs. Our other needs assessment-related deliverables include the Bi-Annual Communities Served reports, which are due in February and August of each year. These describe the composition and nature of the research alliance work and also document any gaps in service coverage in the region. A major deliverable is the Updated Annual Plan (UAP) for each subsequent contract year. The draft of the UAP is due in October of each year and planning for the next year's work begins as early as June of the current year. The purpose and due dates of these deliverables strongly influence the relevance, timeliness, and utility of needs assessment findings. As one might already note, the deadlines for the UAP (which is when needs assessment results are needed for planning) and AAAN (which is when results are formally reported) have implications for implementing needs assessment activities discussed later in this paper.

### A. Needs Assessment Data Sources

REL AP's work is driven by its region's needs, both within and beyond the research alliances. There are various sources for identifying regional needs, which are presented in Figure 1. These include local educators, state association and education officials, research alliance members, and REL AP Governing Board members. Other sources of needs data include Ask A REL requests. Ask A REL is a public request system whereby anyone can submit a question or information request. As part of a broader scan of issues and needs surfacing in the region, evaluators conduct ongoing reviews of regional news, publications, and state policies and legislation.

**Figure 1. Sources for identifying regional needs**




**B. Needs Assessment Design and Methods**

The design and data collection methods for the AAAN are guided by the following overarching research questions:

1. What data use and analytic needs exist in the region?
2. What is the nature and extent of data use and analytic needs in the region?
3. What are the implications of these needs for the priority topic areas?
4. What are the implications of these needs for current and future research alliances?
5. What are the implications of these needs for REL AP's annual plan?

Table 1 presents the data sources, data collection methods, and data collection timeframe for AAAN needs assessment activities as planned for the second contract year. The following sections will present how actual implementation realities resulted in modifications to the needs assessment plan.

**Table 1. AAAN key data sources, and data collection methods**

| Data sources | Data collection method[a] | Data collection frequency |
|---|---|---|
| 1. REL Governing Board | 1. Meeting notes, summary, focus groups, interviews | 1. At each meeting |
| 2. Ask A REL requests | 2. Review of needs data from public request system | 2. Weekly |
| 3. State officials | 3. Interviews | 3. 1x/year |

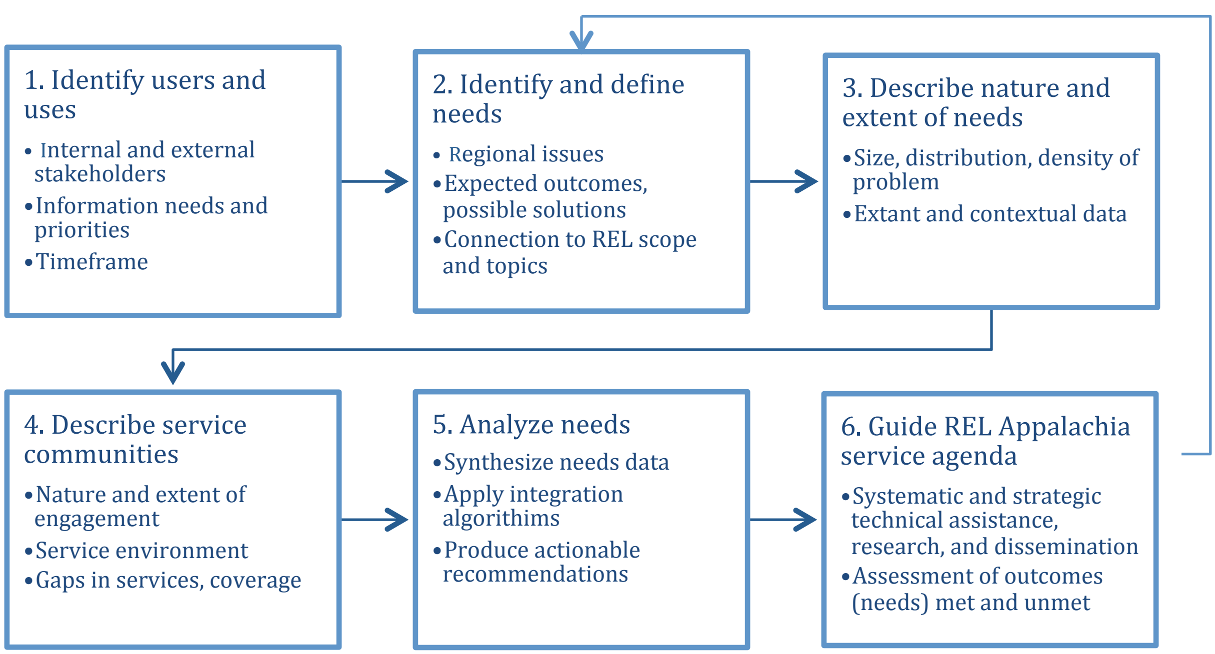
| Data sources | Data collection method[a] | Data collection frequency |
|---|---|---|
| | | |
| 4. Alliance members | 4. Review of internal documents; stakeholder feedback surveys | 4. Monthly |
| 5. Regional news, publications, policy briefs, state legislative proceedings | 5. Regional news and policy scans | 5. Ongoing |
| 6. Non-alliance stakeholders | 6. Regional stakeholder survey and interviews; needs information from other regional providers | 6. Annually |

[a] Evaluators cannot collect data from more than nine individuals using a single instrument without securing OMB clearance.

**B. Six-Step Needs Assessment Process**

The design and data collection methods for REL AP's needs assessment occur within a six-step framework (Figure 2). The steps form an ongoing cycle of needs assessment as the assessment of program outcomes often involves measuring whether needs have been met and identifying unmet needs that will need to be addressed. The following sections describe each step, examples of application in practice, and challenges experienced during implementation and solutions.

**Figure 2. REL Appalachia's six-step needs assessment process**



Step 1: Identify users and uses. To ensure the utility and relevance of findings, the first step identifies the intended users and uses of the needs assessment findings (Patton 2008). For REL AP, the internal stakeholders who will use the needs assessment data to inform the development and refinement of technical assistance, research, and dissemination activities include REL leadership, the alliance coordinator, alliance researchers, and project researchers. This group comprises the primary users of the needs assessment data. The data give REL AP a deeper understanding of priority topics and of needs as they pertain to specific target audiences (e.g., research alliance members) and broader education communities in the region (i.e., non-alliance members). Needs assessment findings also are relevant to external stakeholders, such as research alliance members, state education agencies, and the REL Program in general, as cross-regional solutions can be used to address common needs. This step relates to the following questions:

- Who will use this information and for what purposes?
- Do intended users have information priorities and timeframes that might influence the data collection schedule?

The challenge that surfaced as a result of carrying out this step was realizing that the timeframe for using need assessment results to inform project planning for the upcoming year did not align with the deadline for AAAN report. Each year, the RELs carry out a scope of work they carefully define and IES approves the prior year. While there might be slight modifications to the work, IES expects the RELs to implement projects as proposed. Therefore, the greatest need for needs assessment is in informing the work for the year to come. Planning for the following year begins as early as June, which means any needs data available to inform that process must be gathered between January and May of that year, and therefore only represents needs identified during that five-month period.

To ensure that internal stakeholders had access to current needs assessment data, evaluators devised three solutions:

- Created informal feedback loops to convey current needs data, such as internal memos that summarized needs data to date;
- Contributed to ongoing planning discussions with project staff; and
- Built information databases that capture needs data and are easily accessible to REL AP staff through a shared server.

Step 2: Identify and define needs. The second step involves identifying and defining needs. In this process, we identify and define regional issues and problems, acknowledging that needs are socially constructed and based on stakeholders' experiences, assumptions, and perceptions of the issues at hand. We cannot assume that everyone has the same definition of a problem or its possible solutions. Therefore, in this step of the needs assessment process, we examine the different perspectives that people may have, and we identify the underlying cause of the need, the expectations for outcomes should the need be addressed, and the feasibility, use, and efficacy of possible solutions (McKillip 1998).

Inherent to all RELs is the challenge of responding to a wide array of stakeholder needs within the parameters of a given REL's work agenda. Even if needs fit within a REL's priority topic areas, they can still be too broadly defined to translate into actionable recommendations for analytic technical assistance and research. A balance must exist between identifying needs that inform new work and needs that deepen and further focus current work. Therefore, a key aspect of this step is to facilitate both general and targeted needs identification activities. Various data collection methods, such as stakeholder feedback surveys, focus groups, interviews, Ask A REL submissions, literature and news media scans, and document reviews, are effective means of identifying regional needs and possible solutions.

This step relates to the following questions:

- What need is identified?
- Is the need clearly defined? Is there agreement on its definition?
- If the need is met, what outcomes would we expect?
- What do stakeholders perceive as possible solutions for addressing this need?
- Where does this need fit in the scope of the REL?

We carried out several activities to identify and define needs across states, topic areas, and stakeholders. We collected data from multiple sources, as mentioned previously, to ensure that varied perspectives are represented during the needs identification process. As part of this effort we conducted a fishbone activity (Altschuld and White 2010), which is similar to a root-cause analysis, with REL AP Governing Board members, who represent district and state stakeholders. Engaging Governing Board members in this process helped to identify the problems and ensuing needs they perceive as priorities in their states. This process also began to define the outcomes we would hope to see if the solutions put in place to address the problems are effective. Additionally, we created an internal information database, the Services and Needs database, which REL AP staff populates with information, including needs identification, each time they interact with stakeholders.

We encountered one significant challenge during our implementation of this step. We had hoped to use an extant survey or develop one to administer to non-alliance stakeholders throughout the region. Because this was not part of the approved scope of work for the year, we were limited to collecting data from a sample of nine or fewer participants for each stakeholder group. As such, we changed our primary data collection method from a regional survey to phone interviews. Because we could only interview nine or fewer participants with each protocol, we developed 16 tailored interview protocols specific to each stakeholder group (teachers, principals/superintendents, state education agency representatives, and policymakers/legislators) and each of the four states. As a result of this change in method and the subsequent review and approval process for the protocols as well as the time spent identifying the interview sample and scheduling interviews, we were unable to begin interviews prior to June. Therefore, data from our primary data collection method was limited during the UAP planning process. Next year, we will conduct interviews beginning in early spring.

Step 3: Describe nature and extent of needs. In this step, evaluators assess the size, distribution, and density of the problem and describe the nature of service needs. It is important to understand how the population in need experiences the problem, what their perceptions are about barriers and lack of access to resources, why the problem exists, and what other problems might be associated with it (Davidson 2005). In this step, evaluators often involve key stakeholders and experts, who can provide useful information about the target populations and their needs (Davidson, 2005). Often, extant data sources such as survey and census data from widely recognized and valid sources can help to estimate the distribution and extent of the problem and gauge whether it is improving, stable, or getting worse.

This step relates to the following questions:

- How widespread is the need?
- What do we already know about the need and possible solutions?
- What additional information would help us better understand the nature of the need and how to address it?

We examined census data and regional data from other service providers, but found it lacked the specificity necessary to reflect how widespread the needs we identified in the region were. Consequently, we used scans of regional news, policies, publications, and other digital public resources to help build our understanding of educational trends, issues, needs, and responses to those needs in the region. We also considered the work of other RELs as many of the needs of the Appalachia region are not unique.

Through our interview process, we could get a sense of how widespread a need was based on common themes surfacing among multiple stakeholders. However, it was still hard to determine how widespread a need was with limitations on sample size for data collection methods. As such, we used informal communication networks among REL AP staff for sensing needs as they interacted with stakeholders in the field, such as during conferences, annual meetings, and professional development events. This informal needs sensing process proved to be effective in reaching a variety of stakeholders.

Step 4: Describe service communities. The next step involves describing the communities served by REL AP and the service environment across the region. It is important to clearly identify and define target audiences and the characteristics that collectively give rise to their shared needs. We can distinguish target populations as those who are in need versus those who are at-risk (Rossi, Lipsey & Freeman 2004). The Bi-Annual Report on Communities Served addresses this step by presenting characteristics of the research alliances, their level of engagement, and the work underway to address their needs. This step draws on information generated by REL staff, who continually provide information on available technical assistance and other resources so that REL AP's services are complementary and harmonious with other providers in the region. This information also helps to identify gaps in services.

This step relates to the following questions:

- What are the characteristics of the communities served by REL AP?
- What services are they receiving?
- Are there gaps in service coverage?

To carry out this step, evaluators reviewed internal documentation on research alliances, their composition, the nature of the work, and the intensity of services. We also considered how other service providers, such as the Appalachian Regional Comprehensive Center, might be addressing the needs of the same regional stakeholders. Furthermore, we examined customer satisfaction data related to needs to determine whether the services provided to participants were met, and if unmet needs still exist.

The challenges associated with this step included determining how to describe the REL's nature of engagement with alliances and the intensity of services provided to alliances. It was also challenging to represent REL AP's distribution of services and to identify gaps in service.

We addressed these challenges in multiple ways. First, we developed definitions of the constructs we were measuring, such as alliance composition, alliance focus, nature of engagement, service intensity, and service coverage. Table 2 presents a brief description of each key construct along with its data source.

**Table 2. Communities served measurement constructs**

| Construct | Description | Data Source |
|---|---|---|
| Research alliance composition | Number and type of members; geographic distribution | REL AP internal documentation |
| Alliance focus | Alliance goals; current and planned work | Year 2 Updated Annual Plan; monthly progress reports |
| Nature of engagement | Based on Himmelmann's framework for collaborating, cooperating, coordinating, and networking | REL AP Services and Needs database |
| Service intensity | Number of contacts made and services delivered; number of participants reached; service purpose | REL AP Services and Needs database |
| Ensuring service coverage | REL AP contacts with non-alliance members; regional needs sensing activities | Ask A REL; needs assessment; news and literature scans; Services and Needs database |

Second, we used GIS mapping software to give visual representation of service coverage across the region. We will use the service delivery maps to show how the reach of REL AP's services changes over time. REL AP staff now tracks and documents the location of service recipients in a shared database called the Services and Needs Database.

Third, we developed the REL AP Services and Needs Database to document, quantify, and describe the services REL AP delivers to alliance members and stakeholders. REL AP staff members populate the database with information that reflects the services delivered and contacts made with stakeholders. Within the database, staff has the opportunity to document the nature of the services they deliver, how many people they reach through those services, the purpose of service delivery, and any needs identified during delivery of services. For each entry, staff members can also characterize the nature of REL AP's engagement with stakeholders by choosing one of the four dimensions of Himmelman's collaboration framework (2002):

**Networking**: Exchanging information for mutual benefit; minimal time commitment; no mutual sharing of resources.

**Coordinating**: Exchanging information for mutual benefit and altering activities to achieve a common purpose; making access to services or resources more user friendly is the primary focus; moderate time commitments; no or minimal sharing of resources necessary.

**Cooperating**: Exchanging information for mutual benefit and altering activities and sharing resources to achieve a common purpose; substantial time commitments;

moderate to extensive sharing of resources and some sharing of risks, responsibilities, and rewards.

**Collaborating**: Exchanging information for mutual benefit and altering activities, sharing resources, and enhancing the capacity of another to achieve a common purpose; extensive time commitments; full sharing of resources, risks, responsibilities, and rewards.

Himmelman's dimensions for collaboration represent REL AP's various levels of engagement with stakeholders throughout the region. Services that reach broad audiences, such as those associated with information dissemination, needs assessment, and Ask A REL, will likely reflect networking and coordinating activities. Services delivered in conjunction with research alliances should reflect a progression from networking and coordinating as alliances get started, to cooperating and collaborating as alliances coalesce and mature over time.

Step 5: Analyze needs. In steps 1 through 4, evaluators collect needs data from a variety of sources. We also clearly define needs and the characteristics of the populations who have these needs. We describe how the needs fit within the context of REL work, and we look into possible solutions to address the needs. In step 5, evaluators use the information gleaned in steps 1 through 4 to arrive at actionable, informed recommendations. Specifically, we synthesize the data, using both quantitative and qualitative procedures to prioritize and categorize needs (Altschuld and White 2010) according to

- priority topic (i.e., CCR, LAS, SETL);
- state (i.e., KY, TN, VA, WV);
- feasibility criteria;
- alignment with current or future alliance focus area and REL scope of work; and
- sub-topic focus areas (e.g., early warning systems, dual enrollment/dual credit, data use to guide instruction, and turnaround strategies).

The more explicit and open the process of data analysis is, the more likely it is that intended users will accept and implement the recommendations. Ideally as part of this step, evaluators engage REL AP staff in interpreting needs data and co-developing recommendations.

This step relates to the following questions:

- Which needs are most prevalent, relevant, and important? Which needs might other service providers address?
- How can we feasibly and effectively address these needs through technical assistance, research, and information dissemination?

To ensure that our data was comprehensive, we consulted multiple and varied data sources, previously mentioned. This included needs data representing regional, state, and local needs. We also contributed to planning discussions about the feasibility of responding to identified needs.

Our greatest challenges for this step included synthesizing various types of data from multiple sources and determining which needs should be prioritized. To address these challenges, we developed a synthesis process that followed three steps:

1. Analyzing data from each source separately and moving key findings into a synthesis database;
2. Establishing and applying prioritization criteria to key findings for each source; and
3. Conducting qualitative analyses across prioritized, key needs.

Our process for analyzing data for each data source primarily involved qualitative analyses, including content analysis or analytic induction. We used REL AP's priority topic areas, sub-topic areas (some of which were emergent), and states to organize the data from each data source and to create a framework for examining data across categories. Next, we established prioritization criteria related to two constructs: the equitable distribution of services and the feasibility of responding to the need.

Within the construct of equitable distribution of services, a need was evaluated according to two criteria: (a) fitting within the topic areas of college and career readiness, supporting effective teachers and leaders, and improving low achieving schools in at least one of the four states, and (b) aligning with the focus of a current alliance, justifying the creation of a new alliance, or is deemed relevant and important enough to address outside of the alliance work (e.g., state-level analytic technical assistance or research).

Within the construct of feasibility of response, a need was evaluated according to two additional criteria: (a) fitting within the REL scope of work such that a response calls for analytic technical assistance, research, or information dissemination around data use and (b) the work is feasible to accomplish within the remaining contract period.

A need received one point for each met criterion, for a total of four possible points. Table 3 presents a matrix for determining whether a need warrants inclusion in the final data synthesis across data sources. A need with high equity and feasibility ratings (total of four points) automatically moves forward to the next phase of the data synthesis process. A need that is highly feasible but that did not meet one of the two equity criteria could still be considered for inclusion. A need that did not meet both of the feasibility criteria was not included in the final synthesis.

### Table 3. Priory Criteria Matrix

| | High Feasibility | Low Feasibility |
|---|---|---|
| High Equity | 4 points: Need identified require a response and action | 2-3 points (0-1 pt for feasibility): Work is warranted, but not feasible. A response is not feasible. |
| Low Equity | 2-3 points (0-1 point for equity): Work is feasible, but might fall oustide of priority area or current work. Should explore this need further. | 0-2 points: Does not warrant a response |

After applying the prioritization criteria, our final step was to synthesize the data across sources within each topic area and create recommendations for REL AP to respond to the identified needs.

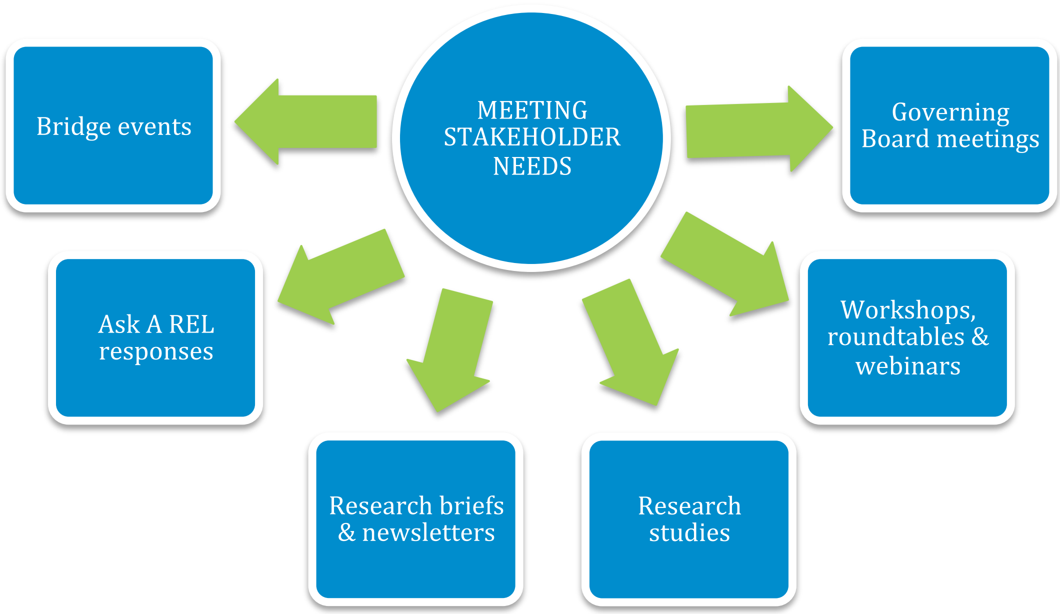
Step 6: Guide REL AP service agenda. The final step involves using needs assessment findings and recommendations to guide REL AP's agenda for technical assistance, research, and information dissemination. Rather than identifying and responding to individual needs in isolation, this step supports REL AP in enacting a systematic, coordinated, and strategic response. REL AP can then communicate needs assessment findings, recommendations, and our planned response to external stakeholders. Once we deliver needs-based technical assistance and research, outcome measures should reveal whether needs have been met and whether additional needs have surfaced, and, thus, the process cycles to the needs identification step of the assessment process.

This step relates to the following questions:

- How are we responding to regional needs in a coordinated, systematic, and strategic manner?
- How can we communicate our response to our stakeholders?
- Are we addressing the needs we set out to effect?
- As we look at the outcomes of our work, are new needs surfacing?

Our work related to this step involves documenting and reflecting on our services to target audiences. REL AP responds to regional needs in various ways, including well-planned technical assistance activities, systematic research studies, and information dissemination (see Figure 3). We assess whether we are addressing the needs we set out to effect by collecting ongoing customer satisfaction data. As we conclude our work from one year, we identify any unmet needs, and refer to those in defining our work in the year to come.

**Figure 3. Ways REL AP responds to stakeholder needs**




One challenge for REL AP is finding effective ways of communicating our response to needs assessment results to stakeholders in the region. Two solutions have been to present findings to Governing Board members during annual meetings and to highlight work on the REL AP website and e-newsletters. Both of these dissemination mechanisms reach broad audience within and beyond the Appalachia region.

## III. Lessons Learned

Throughout the first year of implementing the six-step needs assessment process, we have learned valuable lessons that inform our work moving forward. Each is briefly described below.

- *Data collection activities need to occur according to planning deadlines, not deliverable deadlines.* Given the evolution of the REL work during a contract year, REL staff use needs assessment data most during the annual planning process. This typically occurs four months prior to the needs assessment final report. While ongoing and informal needs sensing activities occur throughout the year, primary and systematic data collection should occur with respect to project planning timeframes to ensure it is available when needed and represents reliable and comprehensive feedback from stakeholders.

- *Needs assessment team members need to be integrated into the alliance work*. This seems obvious, but integrating work across teams rather than in silos requires new ways of thinking about the role of needs assessment in the work. With someone representing REL needs assessment in each alliance, this allows for more informal and ongoing needs sensing. As a result, evaluators are able to make more informed recommendations for how needs data relate to current and future work. Additionally, evaluators can identify needs common across alliances and make recommendations that will help the REL leverage resources and identify opportunities for cross-alliance collaboration.
- *Data collection must balance identifying broad regional needs with targeted alliance needs.* Even while evaluators direct their attention to specific needs within alliances, we must balance those efforts with needs sensing activities across the region. This allows us to identify unmet needs and gaps in service coverage.
- *Needs data must be communicated in a timely manner with attention to relevance and feasibility.* For needs data to be use, it must be timely, relevant and feasible. Creating feedback loops and shared informational databases helps REL staff access current needs data. Including needs assessment updates on meeting agendas and disseminating internal memos summarizing findings to date keep stakeholders' needs in front of REL service providers.
- *Building internal capacity to informally assess and document needs is critical*. It is important to recognize that service providers are often in the best position to ask their stakeholders what they need. They often do this as part of their work without even realizing it. While the information they learn from their direct stakeholders helps to inform their own work, they might be identifying needs that are surfacing elsewhere as well. By increasing service providers' awareness that they have a role in the needs assessment process, they are able to ask more targeted needs sensing questions, probe accordingly, and document comprehensively in the Services and Needs database. Helping services providers see needs assessment as an integral part of their work increases the likelihood that needs assessment findings and recommendations will be useful and meaningful.

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