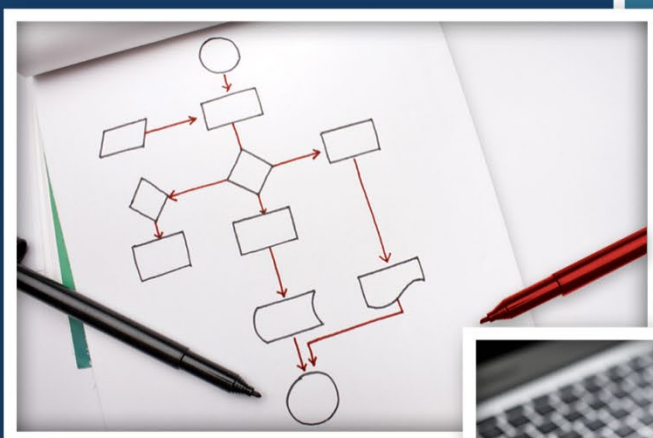




U.S. Department of Labor  
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Office of Policy Development and Research  
Division of Research and Evaluations

# Evaluation Toolkit: Key Elements for State Workforce Agencies

SPRING 2018



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*Disclaimer: The resources, templates, and information provided in the Evaluation Toolkit serve as a general guide for states and local areas. Although, every effort is made to ensure that the material within this document is accurate and timely, we make no warranties or representations as to the accuracy or completeness of the contents, whether the contents are current, or free from changes caused by third parties. All information is provided "as is" without warranty of any kind. No information provided in this document may be considered legal advice and it is the responsibility of each user of the Evaluation Toolkit to ensure that their materials meet all Federal, state and local requirements. Use of the materials does not imply compliance with ETA requirements.*

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# Introduction

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This publication presents information to help State Workforce Agencies (SWAs) implement provisions on evaluation in the Workforce Innovation and Opportunity Act (WIOA). Commissioned by the Employment and Training Administration (ETA) of the U.S. Department of Labor (DOL) and it is part of a larger technical assistance (TA) effort to build the evaluation capacity in state workforce systems.

Planning strategies and implementation tools, presented in the form of a toolkit, build upon technical assistance, research and guidance previously developed by ETA's Office of Policy Development and Research, DOL's Chief Evaluation Office (CEO), and other sources. The information share in this toolkit also includes a working definition of evaluation; and describes the purpose, context, rationale, and types of evaluation as key element to build upon or expand state evaluation capacity. In addition to the key evaluation elements, this guide also summarizes States' evaluation activities and themes documented in an assessment and scan conducted by the National Association of State Workforce Agencies (NASWA). The latter part of the toolkit details a "how-to" guide for designing evaluations, most of which comes from technical assistance material created to promote independent, high-quality evaluations under the Workforce Innovations Fund (WIF) grants.

Each toolkit section provides information about either evaluation fundamentals or expectations specific to state evaluation efforts, with each section providing information that later sections build upon. The toolkit uses a broad-based perspective to maximize its usability. Some sections may be more or less useful than other sections, depending on your level of evaluation knowledge and expertise. For those who want to delve into evaluation design, additional resources and references organized by specific topics are included in the Appendix. Toolkit information in each of the following sections combined with the additional resources provides state administrators and evaluation managers with an easy-to-use, one-stop TA guide.

**Section 1** provides an overview of evaluation purposes and key concepts, including differences between program performance, program monitoring, program research, and program evaluation. This section also describes WIOA state evaluation requirements and practice, and presents a summary of research and evaluation gaps identified in the NAWSA scan. Section 1 sets the stage for the rest of the toolkit.

**Section 2** describes DOL/ETA evaluation policy, evaluation plans and research learning agendas; it presents to broaden state research and evaluation activities that include building relations, leveraging existing funding sources, expanding staff skills and capacity, using and sharing administrative data, and leveraging and integrating of data. This section also describes the need to develop a state evaluation plan or learning agenda.

**Section 3** outlines the types of evaluation, provides key considerations for evaluation designs, and reviews key elements for developing a timeline for an evaluation project to use under which circumstances. **Section 4** into implementing evaluation activities, evaluation design reports, data analysis plans, protecting participant data, and presenting

interim and final study findings. **Section 5** describes the processes and steps to consider when selecting an evaluator—from utilizing in-house staff to using external partners, such as institutions of higher education or contracted third party research firms. **Section 6** covers factors to consider when determining who may conduct the evaluation.

The **Appendices** include a table that delineates the differences between performance Research, and Evaluation, the WIOA regulations on evaluation at 20 CFR 682.220, 13 different sets of resources and reference to consider as you develop evaluation designs. The appendices also include a template to assess your agency’s evaluation capacity, an example of the learning agenda process a Logic Model template, and a glossary of the most common evaluation terms.

While this toolkit intends to be a guide with key evaluation elements for SWA managers and staff, it also may be of interest to State and Local Workforce Development Boards (WDBs), American Job Centers (AJCs), and State and local partner agencies. As WDBs and AJCs participate in partnership activities, an awareness of State evaluation planning, design, and data collection and analytics may help with utilizing evaluation findings to improve services and outcomes for the benefit of customers in the workforce system.

# 1. State Evaluations and WIOA

The Workforce Innovation and Opportunity Act (WIOA), passed in July 2014, includes strengthened provisions for State evaluations. The use of evaluation in public workforce system aligns with an expanding movement in the U.S. toward evidence-based policy. As seen most recently in the 2017 report<sup>1</sup> of the [Commission on Evidence-based Policymaking \(CEP\)](#) and a chapter in the 2018 Federal Budget<sup>2</sup> focus on evidence-based policy and describe evaluation as a means to help government agencies “learn what works and what does not, for whom and under what circumstances, and how to improve results.”<sup>3</sup>

The sections below offer a working definition of evaluation and review requirements in WIOA on evaluation.

## 1.1 Purpose of Evaluation

The use of evaluation to measure the effective and efficient use of funds for services is a management function for successful government programs. Federal, state, and local policymakers are increasingly aware of the need for rigorous evaluation results to support evidence-based policymaking—making well-informed decisions about program investments. In this era of limited public resources, information on program effectiveness is especially critical for state workforce administrators in setting the direction for state and local implementation of WIOA—what specific programs, services, or activities to prioritize within the context of formula grant, discretionary grant, and national programs, state economic development priorities, and state labor market dynamics.

Evaluation results, findings or recommendations are also critical for garnering or maintaining support for a specific initiative. An evaluation tell you whether a program produces positive outcomes (e.g., were program participants able to find a job, increase their earnings), and it can tell you how the program achieved



### Evaluation As Used in Toolkit

The term “evaluation” is broadly used include the study of workforce programs, systems, strategies, services, activities, or interventions. An evaluation study:

- 1) Examines specific interventions, service elements, or activities within a program;
- 2) Measures the impact of services a target population such as, youth with disabilities; or
- 3) Determines the effect or effects of services using administrative data from a statewide system such as, a career pathways system, or a statewide strategy such as an industry sector strategy, to name a few possibilities.

<sup>1</sup> See the report at: <https://www.cep.gov/content/dam/cep/report/cep-final-report.pdf>

<sup>2</sup> “Building and Using Evidence to Improve Government Effectiveness,” Chapter 6, *Budget of the U. S. Government, A New Foundation for American Greatness, Fiscal Year 2018*, May 2017, p 55, [https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/ap\\_6\\_evidence.pdf](https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/ap_6_evidence.pdf)

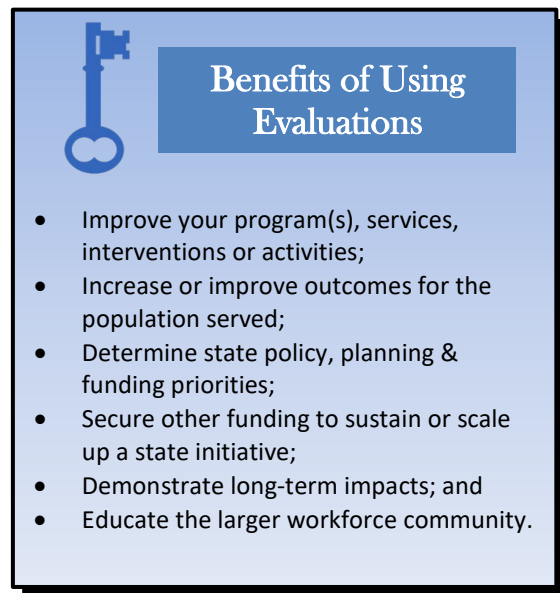
<sup>3</sup> More recently, the *President’s Executive Order on Expanding Apprenticeships in America, June 15, 2017, Section 10 Programs*, calls for rigorous evaluations of existing programs. The Office of Management and Budget (OMB) directive providing *Fiscal Year 2019 Budget Guidance, July 7, 2017* calls for agency proposals on building and using a portfolio of evidence and strengthening agency capacity to use evidence, evaluation, and data as tools to improve federal government effectiveness.



results when you follow an evaluation design plan with a defined methodology and data analytics (e.g., what activities or actions produced the results).

Evaluations can positively affect your program planning and implementation efforts, the individuals served, strategic policy planning, and funding efforts; as well as your coordination efforts with the larger workforce community. The benefit of evaluation may help with the following actions:

- Improve your specific programs, services, interventions or activities. Evaluations can tell you whether your program service components produce positive outcomes or whether there is a need for other program improvements. Learning that certain program components may not produce the intended results envisioned may be just as valuable as learning that your program(s) have positive results. You can then make changes that may result in improved outcomes for the individuals served.
- Use of tested or evaluated innovative interventions may also increase or improve outcomes for program participants. Program improvements identified through evaluation findings may show more effective or efficient results that lead to better services for participants and produce desired outcomes.
- Determine which state policies to implement, planning activities to continue, and funding priorities to consider as part of WIOA program administration and management; both, in the short-term and in the long-term as you develop a meaningful four-year state plan.
- Secure state or other funding needed to sustain and scale up a state priority initiative. Funders generally seek to invest in proven strategies that are effective. If your evaluation produces positive or promising findings, how you disseminate those results may increase support. Many states, funders, and employers report an interest in continuing and even scaling up program(s) that demonstrate a tracked record of effectiveness.
- Demonstrate long-term impacts to individuals and communities. Impact evaluations may help you emphasize the causal evidence or attributions of the services used in your program(s) produce a change or changes in the existing service delivery area.
- Educate the larger workforce development community. Your fellow state workforce administrators, evaluation managers, and policymakers may benefit by learning



about your participation in program evaluations. Positive outcomes or impacts may increase support for similar programs and services in other communities. Conversely, positive outcomes or impacts may prompt other localities operating different programs to adapt a program (or program elements) similar to yours.

## 1.2 Context for Evaluations in State Workforce Agencies

The National Association of State Workforce Agencies (NASWA) conducted a state scan on research and evaluation capacity in May 2017.<sup>4</sup> It includes a summary of an assessment from the responses of 41 states. Designed to collect information about current research and evaluation capacity within state workforce agencies (SWA) the national scan summarizes the SWA responses and findings related to research agendas, state agency support, staffing, funding, and data capacity. The scan also includes two case studies—Washington and Ohio SWAs identified as “high achievers” in within the context of each state’s research and evaluation capacity. The report summarized the SWA responses and findings related to research agenda development, state agency support, staffing, funding, and data capacity. It also further identifies technical assistance and capacity needs by research skill area. While the NASWA scan allowed DOL to understand the interest or demand for the types of research and evaluations produced, the kinds of partnerships used to fund, conduct or participate in research and evaluations “only a handful of state agencies reported having sufficient capacity to conduct research on program impacts.”

As restated in the scan, WIOA also emphasizes the use of data to inform workforce development planning and implementation decisions in three key program management areas, to: develop state policies and programs; support the front-line delivery of customer services; and address state and local workforce agency accountability through performance outcomes. In essence, WIOA calls for states to use research and evaluation data to make evidence-based policy and program decisions. However, articulating the differences between data uses for performance management, research activities, and evaluation is somewhat difficult given various state perspectives on how the terminology is used; and as the NASWA scan findings relate to the kinds of research and evaluation predominantly conducted by SWAs. The *Performance, Research and Evaluation Framework* presented in **Appendix A** may help you think about program research and evaluation activities within the broader context of the work conducted by state workforce agencies. This framework identifies the activities and components or examples of performance tracking, measurement, and accountability, monitoring, research, and evaluation to demonstrate the differences in purpose and execution.

As observed by the NASWA scan, state-conducted research and evaluation activities tend to focus on the reporting and analysis of performance outcomes, Labor Market Information (LMI) research including special analyses, and other forms of descriptive or comparative research and analysis. As we learned, an emphasis on descriptive and comparative research analysis and reports drives the need to manage state and local performance

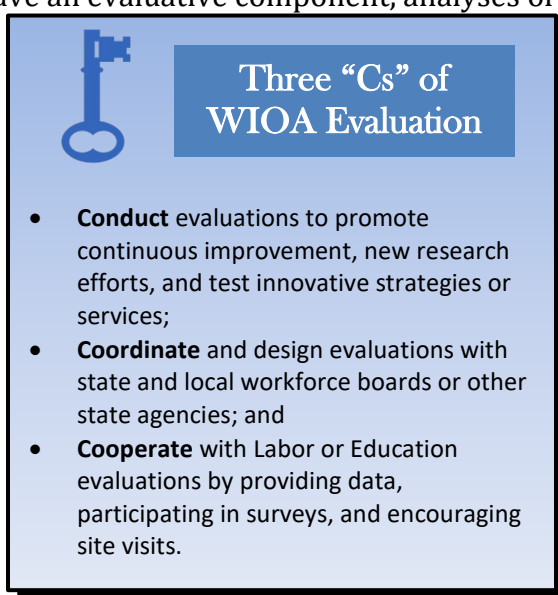
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<sup>4</sup> “[Evidence-Building Capacity in State Workforce Agencies: Insights from a National Scan and Two State Site Visits](#)” Yvette Chocolaad, Stephen Wander, National Association of State Workforce Agencies

accountability systems, LMI and other related research (e.g., Bureau of Labor Statistics [BLS], Federal-State Cooperative Program; ETA Workforce Information Grants for States). Program performance and labor economic and statistical activities, however, build a foundation for state-conducted evaluations and support evidence-based policymaking.

To focus your attention on building or expanding state research and evaluation capacity, this toolkit addresses the evaluations for workforce development programs. As such, program evaluation within the broader context of the WIOA regulations, noted in **Appendix B**, describe allowable evaluation methodologies and components as follows:

- States may consider a broad array of options in the types of studies considered evaluations. These types of evaluation may include “process and outcome studies, pilot and demonstration projects that have an evaluative component, analyses of administrative and programmatic data, impact and benefit-cost analyses, and use of rigorous designs to test the efficacy of various interventions.”
- State evaluations may include many other components, such as “multiple phases and such tasks and activities as necessary for an evaluation, such as a literature or evidence review, feasibility study, planning, research, coordination, design, data collection, analysis, and report preparation, clearance, and dissemination.”
- In addition to the evaluation design phases and tasks, states can coordinate with WDBs and other state agencies, cooperate with Federal evaluations, disseminate evaluation findings, and use state set-aside funds to conduct evaluations.



**Three “Cs” of WIOA Evaluation**

- **Conduct** evaluations to promote continuous improvement, new research efforts, and test innovative strategies or services;
- **Coordinate** and design evaluations with state and local workforce boards or other state agencies; and
- **Cooperate** with Labor or Education evaluations by providing data, participating in surveys, and encouraging site visits.

State responsibilities for implementing evaluations focus on three applicable approaches that we refer to as the “three C’s” of WIOA evaluation: conducting and coordinating evaluations and cooperating with federal partners who conduct evaluations. This toolkit describes key evaluation elements to consider as you plan, procure, design and implement evaluations for workforce development programs.

### 1.3 Gaps in and Benefits of Evaluation Activities

Evaluations, other forms of research, and data analytics exist in varying degrees of use within the public workforce system. The NASWA state scan found that among the states responding to their assessment, there was, with the exception of one state, “a demand...for the types of information that workforce agency research and evaluations can produce” and that these requests emerged from State agencies, as well as from the state legislatures and governors’ offices. Many of the “most pressing questions” identified as topics for research

and evaluations focused on program outcomes or impacts and understanding the labor market in the state. However, some State agencies also posed questions “aimed at better understanding customers and their barriers” or “improving program operations and administration.”

Of the states who responded to the NASWA scan, 75% indicated the existence of at least one unit that initiates and advances research and evaluation efforts. Furthermore, a higher percentage of state workforce agencies use or partner with “outside researchers to conduct at least one research or evaluation effort,” over a four-year period. The scan findings indicate “staff capacity and funding, research and evaluation activities, and research and evaluation methods were less encouraging” with “more than half of the [SWAs]...producing three or few in-house research and evaluation studies” over the same four-year period.

Conversely, as the NASWA study found, there were consequences for States that were not able to conduct adequate levels of evaluation and research due to resource constraints. State respondents provided comments that without sufficient funding for such activities, it was difficult “to anticipate changes in trends and make timely data-driven decisions;” “...harder to make sound policy decisions without proper research;” and that it led to “limited knowledge, unknown effectiveness, limited transparency, reduced consumer choice.”

Beyond the SWAs capacity and efforts to produce research and evaluation products, and concerns with resource constraints, “only a handful of the reporting agencies report having sufficient capacity,” related to the “research skill areas most often associated with evidence-based policy-making—conducting experiments and employing quasi-experimental designs.”

Employing rigorous evaluations methods may, thus, have a vital and practical role in administering workforce programs. For example:

- Evaluations used within required WIOA planning processes may help to understand services patterns and outcomes, determine which participant groups or service areas need additional resources, and which populations might benefit from different interventions.
- Evaluations may be used to formulate policies or address funding priorities, both, in the near term and a meaningful four-year state plan;
- Evaluation can be used to test new interventions to improve outcomes for program participants;
- Evaluations with demonstrative program results may encourage the SWA, other agency or external funders to



### Benefits of Evaluations

Evaluations can:

- Be used when developing state plans.
- Help to understand program operations and differences in outcomes for groups and/or areas.
- Provide data and insights to help in setting policy or funding priorities.
- Identify proven approaches to improve services or areas for experimentation.
- Secure funding to sustain or scale up initiatives, and
- Build evidence-based practices in the workforce community

sustain and scale up the initiative. If an evaluation produces positive outcomes, impacts or promising findings, it may result in increased support to continue or expand services; and

- Evaluations can help build evidence-base practices to benefit the larger workforce community. In addition to SWA supported evaluations, other state program administrators, evaluation managers, and policymakers can:
  - Benefit by learning how to address evaluation findings,
  - Adopt practices and program models demonstrated as being effective, or
  - Continue to experiment with similar approaches.

Evaluations that provide in-depth information on implementation practices can also help both State and local workforce entities to replicate or adapt a specific program to their settings.

## 2. Broaden State Research and Evaluation Capacity

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As noted in Section 1 above, SWAs must coordinate, to the extent feasible, with Federal evaluations conducted under WIOA, including DOL's own evaluations. DOL conducts a wide array of evaluations—from process and outcome studies, pilot and demonstration projects, programmatic and economic data analyses to impact and benefit-cost analyses studies. Section 169 of WIOA also describes several evaluation and research projects and provides details on the evaluations required for title I programs, career pathways, and equivalent pay. The legislation also suggests seven other research projects for disconnected youth, business needs, nontraditional occupations, performance indicators, public housing assistance recipients, older workers, and credentials for prior learning that may present opportunities for coordination with your SWA in the future.

A SWA may also want to consider several options that may enhance their ability to inform policy and to conduct their own evaluations. For example:

- *Become familiar with the active and recently completed workforce program evaluations and the resources identified found in **Appendix C** of this toolkit.* Utilize current and past Federal research and commonly used evaluation methods to create new opportunities that build upon and increase the body of evidence. The resources in the Appendix are organized under policy, plan and guidance resources; evaluation resources and toolkits; behavioral insights studies; cost studies, data analytics; implementation studies; interrupted time series; logic and theory of change models. Outcome studies; power analysis studies; quasi-experimental studies; and randomized controlled trial studies.
- *Consider an evaluation policy and familiar with DOL's Evaluation Policy Statement.*<sup>5</sup> Developed by the Chief Evaluation Office (CEO) and identifies the following principles: rigor, relevance, transparency, independence, and ethics (in human subject protections)—all of which are relevant to State-conducted evaluations. These principles are similar to those in other Federal agencies, as well as common in standards promulgated by such organizations as the American Evaluation Association.

States may want to follow similar principles to assure stakeholders that their own evaluations include valid and reliable data; evaluations are publicly available, and protect the privacy of individuals who are subjects of the research. The DOL Evaluation Policy also helpfully places evaluation in context of a learning organization, stating that:

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<sup>5</sup> <https://www.dol.gov/asp/evaluation/EvaluationPolicy.htm>.



“Evaluations produce one type of evidence. A learning organization with a culture of continual improvement requires many types of evidence, including not only evaluation but also descriptive research studies, performance measurement, financial and cost data, survey statistics, and program administrative data. Although this policy focuses on evaluation, the principles apply to the development and use of other types of evidence as well.”

The policy statement also addresses rigor in evaluations, no matter what type of study is undertaken, consistent with WIOA regulations. The DOL evaluation principles described in Exhibit 2 use excerpts from the policy statement found on the CEO’s website.

**Exhibit 2.0: Department of Labor Evaluation Principles**

Principle	Brief Description
<b>Rigor</b>	“Rigor is required for all types of evaluations, including impact and outcome evaluations, implementation and process evaluations, descriptive studies, and formative evaluations. Rigor requires ensuring that inferences about cause and effect are well founded (internal validity); requires clarity about the populations, settings, or circumstances to which results can be generalized (external validity); and requires the use of measures that accurately capture the intended information (measurement reliability and validity).”
<b>Relevance</b>	“Evaluation priorities should take into account legislative requirements and the interests and needs of leadership, specific agencies, and programs; program office staff and leadership; and DOL partners such as states, territories, tribes, and grantees; the populations served; researchers; and other stakeholders.”
<b>Transparency</b>	“DOL will make information about evaluations and findings from evaluations broadly available and accessible, typically on the Internet. DOL will release results of all evaluations that are not specifically focused on internal management, legal, or enforcement procedures or that are not otherwise prohibited from disclosure. Evaluation reports will present all results, including favorable, unfavorable, and null findings. DOL will release evaluation results timely...and will archive evaluation data for secondary use by interested researchers (e.g., public use files with appropriate data security).”
<b>Independence</b>	“Independence and objectivity are core principles of evaluation. Agency and program leadership, program staff, stakeholders, and others should participate in setting evaluation priorities, identifying evaluation questions, and assessing the implications of findings. However, it is important to insulate evaluation functions from undue influence and from both the appearance and the reality of bias.”
<b>Ethics</b>	“DOL-sponsored evaluations will be conducted in an ethical manner and safeguard the dignity, rights, safety, and privacy of participants. Evaluations will comply with both the spirit and the letter of relevant requirements such as regulations governing research involving human subjects.”

## 2.1 Expand or Enhance Evaluation Capacity

While a handful of States have developed a robust evaluation capacity, most State workforce administrators face challenges in building their state’s capacity to conduct evaluations. The following subsections identify some key elements and capacity-building

tips that may be helpful to you in addressing the challenges based on a synthesis and adaptation of multiple sources.<sup>6</sup>

**Leadership and Agency Relationships:** Building relationships foster a state culture that supports evaluation and evidence-based policymaking, and to ensuring that evaluations conducted are relevant to all key stakeholders. To build state relationships, consider the following action items.

- Cultivate buy-in—leadership and support—from the Governor’s office, State Workforce Board, and agency heads; and State Legislative staff.
- Develop cross-agency relationships among workforce, education, social services, economic development; identify common research and evaluation goals to allay concerns about funding competition and other “turf” issues.
- Determine and employ strategies to develop and maintain trust regarding information sharing among state agencies and staff.
- Use phased approaches to produce data “wins” that provide the evidence needed for policymakers to make informed decisions and for agency heads to improve programs.
- Produce objective research products upon which policymakers and agency heads can rely.
- Explore legislation to institutionalize cross-state coordination and collaboration concerning data sharing (e.g., establish centralized cross-agency longitudinal administrative data set and key roles and responsibilities for those engaged in data and research efforts).



**Leverage Existing Funding Sources:** To make sound strategic investments, states should invest in evaluations, regardless if the research or evaluation studies are conducted in-house, or through an external partner or research firm. As such, the following action items may be of interest:

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<sup>6</sup> NASWA, February 2017; ETA Listening Sessions, February 2015 and December 2016; CEP, September 2017; Workforce Information Advisory Council, 2017



- Use or continue to use discretionary grants from the DOL Workforce Data Quality Initiative (WDQI) and ED State Longitudinal Data System (SLDS) programs to develop the data infrastructure needed to make research and evaluation possible and efficient.
- *Leverage other DOL grants to states for the development of labor market information and analyses to conduct program evaluations.* Grants from Bureau of Labor Statistics (BLS) Federal/State Cooperative Program and Workforce Information Grants to States (WIGS); despite flat and/or declining funding levels such grants may be leveraged for evaluation activities, as appropriate.
- *Use Governor's statewide set-aside funds to support the conduct of evaluations for Title I core programs, as required by WIOA.* To be responsive to Federal funders, the conduct of evaluation demonstrates efforts toward continuous improvement.
- *Leverage the use of specific program funding for evaluations, where possible; embed evaluation requirements as part of program design and delivery.* As efforts to demonstrate what works increase, the need to employ evidence-based practices also increase. As funding streams allow, develop evaluation requirements into funding opportunity announcements, set expectations for funding recipients, and provide evaluation technical assistance.
- *Partner with research universities to conduct evaluations in common interest areas.* Partnerships with universities allows states to harness their intellectual, research, community engagement, and capacity-building expertise to address a multitude of issues. Universities employ skilled evaluators, support graduate student research opportunities, secure "big data" computing facilities, and other evaluation services they may be able to provide at less cost than private firms or in-house services; and given mutual interests, they may be willing to provide in-kind resources.
- *Seek Foundations with common evaluation interest areas; they may be willing to fund and conduct a particular state study.* The Council on Foundations stresses, "no matter how different foundations can be, they all share the need to know what works, and especially what works well. The better that foundations can demonstrate how their grants are making a difference, the more value they will bring to their communities. To know what works, foundations must [also] evaluate their grants."

**Expand Staff Skills and Capacity:** Many states do not have a research and evaluation unit in their workforce agencies or otherwise lack staff capacity to conduct research and evaluation (skills, especially in experimental research, and staff numbers). To build staff capacity consider the following action items:

- Work with relevant state entities to allow for pay grades that can support hiring experienced evaluators.

- Partner with universities that have strong social science research centers or capabilities.
- Explore hiring graduates from public policy, public affairs, or data analytics degree programs (programs appear to be expanding across many universities).
- Create a data and research staff work environment that is mission driven and promotes innovation to retain talented staff.

**Establish “Big Data” Organizational Structures:** Creating the capacity to house and use “big data” will allow access to data can be shared as necessary for evaluation activities. The two case studies that describe centralization of administrative data and access—Ohio and Washington— in the NASWA, February 2017 report are considered “high achiever” models. Such organizational structures can help multiple state agencies, external researchers, and others readily use workforce, education, and other data to conduct evaluations. Key actions to create such a data capacity include:

- *Develop a cross-agency longitudinal administrative data set covering a range of public programs including wage record data* (see WDQI and SLDS grants as seed funding).
- *Establish a neutral, centralized entity to collect data across agencies.* A neutral agency can set and enforce requirements regarding data collection, data sharing, data access procedures, and security standards, including such elements as—
  - Standardized application and approval processes for data access/data requests;
  - Development of metadata, documentation, and codebooks for use of the data in later research planning;
  - Create confidentiality forms and certification procedures, as well set up a system for Institutional Review Board (IRB) notifications;
  - Produce custom data extracts that are de-identified, longitudinal, and linked across data sources (e.g., employment linked to education);
  - Extracts of approved data transferred via secure protocols; and
  - Data destruction standards and affidavits.
- Partner with universities to establish a centralized entity. Universities can a full-service research center focused on education, workforce development, and human services policy and practice.

**Leverage and Integrate Federal Workforce and Related “Big Data:”** In addition to state-level “big data” integration via WDQI and SLDS noted above, there are other federal-level efforts to factor into state capacity building, including the following examples:

- **Workforce Innovation Performance System (WIPS):** The system used for the collection and reporting of required state and local workforce program data under WIOA (such as, the common measures and other program administrative data).

While all states are fully familiar with WIPS, of special note are the following key elements:

- All core WIOA programs currently use WIPS with a phased-in plan for rest of ETA-funded programs such as discretionary grants and national programs, and others such Veterans' Employment and Training Service programs.
  - Most Federally funded workforce programs now use WIOA common measures.
  - WIPS will have and/or be able to provide access to individual-level data.
- Wage Record Interchange System (WRIS and WRIS2): A data sharing agreement and process that facilitates the interstate exchange of Unemployment Insurance (UI) wage records data between participating states for the primary purpose of assessing and reporting on WIOA state and local workforce program performance, and for selected other workforce programs not under DOL jurisdiction.
- Integrated Post-Secondary Education Data System (IPEDS): A dataset based on inter-related ongoing surveys of degree-granting institutions to report on undergraduate education program participation and outcomes (e.g., enrollment, completions, degrees, and certificates).
- Federal Statistical Research Data Centers (FSRDCs): The U.S. Census Bureau, on behalf of the federal statistical agencies, operates a network of FSRDCs in collaboration with research organizations (hosts) in 18 states and DC to provide secure access to a range of federal restricted-use micro-data for statistical purposes.
- Center for Administrative Records Research and Applications (CARRA): Through this center, the U.S. Census Bureau uses administrative data from federal, state, and third-party providers for statistical activities in support of demographic and socioeconomic research; as of 2017, 12 pilot research and evaluation projects spanning housing, health, welfare, education and labor.

**Develop a Statewide Strategic Evaluation Plan and Annual Learning Agenda:** A statewide strategic evaluation plan and subsequent learning agenda provide the foundation to building research evaluation capacity. These types of planning efforts provide momentum and direction to state evaluation priorities, identify completed research efforts, and identify any current studies underway. A multi-year evaluation plan allows state workforce agencies to consider targeted research priorities and the annual research and evaluation-learning agenda focuses on the state's key and immediate research questions. A multi-year evaluation plan typically requires input from a range of external stakeholders. On the other hand, the learning agenda identifies current research questions that arise from annual program operations and management concerns. Section 2.52 provides additional processes and details for a learning agenda and an example of the Learn Agenda Life Cycle in Appendix D provides some of highlights from the process used by the CEO at DOL.

**Track Major Developments Affecting State Evaluation Capacity-Building:** The Congressional Commission on Evidence-Based Policymaking made many recommendations affecting federal and state data access, integration, and sharing, all of which have implications for state evaluation capacity-building (CEP, September 2017). Bi-partisan legislation to codify an initial set of these recommendations is now moving through the U.S. Congress—*Foundations for Evidence-Based Policymaking Act of 2017, H.R. 4174 and S. 2046*—to be followed by legislation later on to further codify additional other recommendations.

In addition, the Workforce Information Advisory Council (WIAC) established by WIOA to advise the Secretary of Labor on improving the workforce and labor market information system has recently completed its draft report of recommendations which includes several recommendations affecting state evaluation capacity-building (WIAC, draft, January 2018). As state workforce administrators and evaluation managers, you may find it useful to examine the recommendations, and track the results of these efforts to support your capacity building plans.

## 2.2 Develop an Evaluation Plan or a Research Learning Agenda

As you move forward with conducting evaluations under WIOA, development of a comprehensive, multi-year strategic research and evaluation plan, along with annual research “learning” agendas to lay out specific evaluation activities helps to support or address state priorities.

The evaluation section of the state strategic plan can be a starting point for further development of the state’s workforce learning agenda. To further your state program research and evaluation plans, the following resources and tools may be helpful:

- **Examples of Learning Agenda to Examine Current Priorities.** ETA uses a Five-Year Research and Evaluation Strategic Plan<sup>7</sup> that identifies high priority topic areas used for planning research and evaluation, and develops an internal learning agenda to prioritize research questions by program; and Mississippi and Ohio plans featured in the NASWA report (NASWA Case Studies, February 2017). Exhibit 2.2.1 describes the seven elements of a state evaluation plan or research learning agenda.
- **High-Level Research Questions/The Big Questions.** One of the keys to building a state evaluation plan/research agenda involves determining high-level research questions—in other words, over the next year or more, what questions do you want to answer? You may benefit from examining the high-level research questions on the minds of your colleagues identified through the NASWA scan and captured in Table 1-4.
- **Completed State-Conducted Studies.** The NASWA report also provides a list and hyperlinks to recently conducted state studies that may also be useful to examine (NASWA, Appendix B, February 2017).

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<sup>7</sup> The [ETA Five-Year Evaluation Plan](#) describes the types of demonstration and pilot, multi-service, research, and multi-state projects that will focus on the current Administrations employment and training priorities.

### Exhibit 2.2.1: Building a State Evaluation Plan or Research Learning Agenda

Element	Tips
<b>Stakeholder Involvement</b>	Establish or use an existing process for involving all key state agencies, state workforce board, local boards, and other stakeholders to coordinate the development of the plan—overall evaluation goals, study priorities, funding mechanisms, roles/responsibilities.
<b>Evaluation Principles and Practices</b>	<ul style="list-style-type: none"> <li>• Develop a set of evaluation principles. (As an example, see the DOL principles in Exhibit 2.)</li> <li>• Develop a set of core standards or practices to bring quality and standardization to state evaluations, especially regarding coordinating and collaborating with local workforce boards.</li> </ul>
<b>High-Level Research Questions (the “BIG” questions)</b>	<ul style="list-style-type: none"> <li>• Identify high-level research questions that start with—what do state workforce and local boards want to know? What research questions did your agency or other agency program managers identify in the WIOA state plan? (See Exhibit 2.2.2 for the most pressing state research questions as examples.)</li> <li>• Gather input from your state’s governor priorities, legislative requirements, and partner evaluation priorities; and utilize Federal evaluation priorities, external requests from academic or research organizations, and others as appropriate.</li> <li>• Organize key research questions into subject areas.</li> </ul>
<b>Building an Evidence Portfolio</b>	<ul style="list-style-type: none"> <li>• Based on the high-level questions, develop an evidence-based agenda in a particular subject area to think through what is known and not known—what evidence exists to build on, such as literature reviews, evidence reviews, meta-analyses.</li> <li>• Conduct exploratory studies to address the state of the evidence.</li> <li>• Use existing administrative data for descriptive research to understand the relationship between services and outcomes regarding key research questions, such as data analytics projects.</li> <li>• Build evaluation milestones or activities into program designs.</li> <li>• Incorporate the concept of tiered evidence into your building process.</li> </ul>
<b>Tiered Evidence Approach</b>	<ul style="list-style-type: none"> <li>• Build the evidence portfolio using the concept of tiered evidence—increasing the state evidence base over time delineated as a continuum of preliminary evidence on one end of the spectrum and strong evidence on the other.</li> <li>• Add evaluation/evidence requirements into state grant programs, with incremental funding linked to the availability and quality of existing evaluation evidence supporting the proposed program. (See for example, DOL/ETA use of this concept in its funding of Trade Adjustment Assistance Community College and Career Technical [TAACCCT] and Workforce Innovation Fund [WIF] grants.)</li> </ul>
<b>Partnership and Governance Structure</b>	<ul style="list-style-type: none"> <li>• Develop or strengthen an existing state partnership and governance structure involving all key entities responsible for or involved in conducting state workforce research and evaluation, including state and local workforce board. (See Ohio and Washington case studies, for examples.)</li> <li>• Address governance issues such as, agency roles and responsibilities, evaluation priorities, data sharing legal or cultural issues.</li> <li>• Develop partnership practices or procedures for data collection, data sharing, and handling differences in IT systems and data quality.</li> </ul>
<b>Plan, Document, and Disseminate</b>	<ul style="list-style-type: none"> <li>• Develop the plan document(s)—multi-year and annual.</li> <li>• Implement processes for ongoing stakeholder engagement and communication.</li> <li>• Determine if and how to “publish” and disseminate the evaluation plan/learning agenda.</li> </ul>
Adapted from multiple sources: NASWA, February 2017; ETA Listening Sessions February 2015 and December 2016); CEP, September 2017; Corporation for National and Community Service/Social Innovation Fund, 2013 and 2016; DOL/CEO policy guidance from CEO website.	

## Exhibit 2.2.2: Examples of High-Level State Research and Evaluation Questions

<b>States' Most Pressing Questions for Workforce Agency Research and Evaluation</b>	
<b>Program impacts/ effectiveness</b>	<ul style="list-style-type: none"> <li>• Are the educational programs provided to offenders by the state prison helpful in obtaining employment after release?</li> <li>• What is the effectiveness of UI profiling?</li> <li>• What are optimal policies or incentive mechanisms that encourage greatest return on investment?</li> <li>• What is the relationship of TANF participation to successful workforce outcomes?</li> <li>• What is the effectiveness of refugee training services?</li> </ul>
<b>Program performance/ outcomes</b>	<ul style="list-style-type: none"> <li>• Are participants making family-sustaining wages?</li> <li>• What are the workforce outcomes from training programs?</li> <li>• What are the employment and wage outcomes of degree and certificate program completers?</li> <li>• What are the outcomes of Department of Labor and Department of Public Health and Human Services workforce programs (WIOA, RESEA, TANF)?</li> <li>• What are the wage and employment outcomes of apprentices? Does the increase in wages result in sufficient tax revenue to justify an employer tax credit?</li> </ul>
<b>Development of labor market data</b>	<ul style="list-style-type: none"> <li>• How are demographic changes impacting the labor force?</li> <li>• What are the demographics of minimum wage workers?</li> <li>• Where can employers find qualified workers?</li> <li>• What are the new industry clusters (e.g., advanced manufacturing)?</li> <li>• Who are the long-term unemployed?</li> </ul>
<b>Customers and their barriers</b>	<ul style="list-style-type: none"> <li>• What can be done to encourage higher labor force participation rates in targeted populations?</li> <li>• What tools should we create to evaluate client education and skills gaps?</li> <li>• Why are participants not successful, or why do they drop out?</li> <li>• What are the barriers to changing jobs for those currently employed?</li> <li>• What can be done to improve commuter transportation issues?</li> </ul>
<b>Program administration/ operations</b>	<ul style="list-style-type: none"> <li>• What is the accuracy and utility value of WIOA performance measures?</li> <li>• How do we address declining research budgets but increasing demand for data and insight?</li> <li>• How can we build on programs that are working?</li> <li>• Are we maximizing services across programs, particularly across multiple agencies?</li> <li>• How can we increase the number of apprenticeships?</li> </ul>

Source: NASWA, February 2017, page 18.



# 3. Consider Evaluation Types and Timeframes

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While evaluation involves systematic data collection and analysis to answer crucial research questions from policy-makers or program managers, the methods used in any type of research study come from the questions posed. Common types of evaluations include impact studies that seek to determine the effects of an intervention relative to a control or comparison group; outcome studies that use performance data (and may involve statistical methods); cost benefit or cost effectiveness studies; and implementation or process studies.

Similarly, the data used in evaluations also flow from the questions the research seeks to answer; as such, data collection and analyses may be qualitative (derived from individual or focus group interviews with state or local officials, customers, as well as on-site observations and document reviews) or quantitative (as found in program data, wage records, or survey data, for example). However, note that research methods for programs may change over time. Two exciting and relatively recent developments in evaluation methodology are the use of new forms of data analysis and use of behavioral science.

Insights from **behavioral** science explore the effect of tailored communication or program services on customer decision-making can lead to effective public services. Behavioral science insights as a field study is also a new effort by DOL being used to measure the impact of using such techniques to improve the performance and outcomes of DOL programs (Mathematica Policy Research, April 2017). Making specific changes in the structure of programs using behavioral insights may affect participant enrollment and retention, and ultimately improving program outcomes.

This section provides an overview of the major types of program evaluation—and describes their purposes, features, and limitations. It essentially serves as a concise “evaluation 101” overview, and provides a foundation for the content addressed in subsequent toolkit sections. Depending on your level of knowledge about evaluation, this section may be useful as a:

- Refresher or review tool,
- Training or technical assistance tool for staff or stakeholders, or as a
- General tool to help fine-tune your learning agenda.

## 3.1 Four Major Types of Program Evaluation

There are essentially four major types or categories of program evaluation—implementation, outcome, impact, and cost studies—with various subtypes within each. Each type of program evaluation is defined and discussed in this section and is followed by four tables that detail the differences in the subtypes of studies and their associated practical considerations, and cost and levels of rigor considerations.

**Implementation Studies:** An implementation study documents program operation or compares it against goals, across locations, or over time. It describes and analyzes “what happened and why” in the design, implementation, administration, and operation of programs, and is generally used to determine whether a program is being carried out in a manner consistent with its goals, design, or other planned aspects. Implementation analyses can serve as stand-alone studies, especially to document new program processes not yet studied. Implementation studies, as part of more comprehensive evaluations, may also include outcome, impact, and/or cost studies. Implementation studies provide context for other or subsequent evaluation findings and results; and make the findings or results interpretable and useful for the programs, services or interventions studied. Four broad subtypes—Case Studies, Fidelity Studies, Performance Studies, Site Comparison Studies—are examples of implementation analysis described in Exhibit 3.1.1: Types of Program Evaluation—Implementation Studies on page XX.

**Outcome Studies:** An outcome study compares individual outcomes against goals, across programs or locations, or over time. Outcome studies differ from impact studies in one key area of comparative data analysis. Essentially, outcome studies determine if programs achieve the desired results or assess the effectiveness of programs to produce change. Nevertheless, outcomes are often thought (by program staff, not program evaluators) to indicate measureable change or “impact” when outcomes are compared over time or across comparable programs. Two broad subtypes—Longitudinal Studies and Cross-Sectional Studies—delineate the purpose and practicality of the multiple types of comparative analyses to consider in Exhibit 3.1.2 on page XX.

**Impact Studies:** An impact study estimates the difference in individual outcomes attributable to a specific program or policy. Impact studies determine whether a programs or policies measure the intended impacts—that is, the program causes in the differences of the outcomes that it is designed to influence. If the purpose of an evaluation is to determine whether an occupational training program has the desired impacts on the employment and earnings of the individuals it serves, an impact study is the ideal type of evaluation to choose. The best specific type of impact study to carry out depends on considerations such as the budget for the evaluation, the desired level of confidence in the evaluation results, and the practical constraints on conducting an evaluation of a given program. It is important to note that experimental studies (randomized control trials or RCTs) are considered the most rigorous form of evaluation and are often called the gold standard given that they provide the best scientific evidence of what works or does not. However, they are also the most intrusive type of impact study in that they intervene with program processes. Various types of implementation studies are usually part of impact studies such as site comparisons, and fidelity studies, and of course, outcomes are measured. Four broad subtypes—Experimental (RCT) Studies, Quasi-Experimental (QE) Studies, Rapid-Cycle Studies, and Theory-Based Studies—delineate the purpose, describe the uses, and explain the practicality of the various types of impact studies to consider in Exhibit 3.1.3 on page XX.

**Cost Studies:** A cost study estimates program costs, makes cost comparisons, or weighs costs against outcomes or impacts. Cost studies involve analysis of the costs of a program, and some weigh program effectiveness against overall program cost. Sometimes cost



documentation, estimation exercises, or simple cost calculations are considered a cost analysis, but not by program evaluators—while common elements of all cost studies, they are not considered cost analyses. A cost study draws conclusions about program costs based on systematic cost comparisons (particularly between programs and over time) or statistical analysis of cost differences or responses to changes in program features or inputs. The specific comparisons and statistical analyses depend on the program and the quality and detail of available cost data. Three broad subtypes—Cost Analysis Studies, Cost-Effectiveness Studies, and Benefit-Cost Studies—are delineated in Exhibit 3.4 on page XX.

### **3.2 Evaluation Combination and Continuum of Study**

Evaluations often combine several methods. For example, an evaluation of a new program might involve an implementation study combined with an outcome study. The implementation study might include cost estimates or a fidelity assessment as well. Similarly, an outcome study might collect and analyze performance in the near term, for example—a snapshot—or a comparison to outcomes of more established programs. Such a combined study is useful to demonstrate the potential of a particular program and provide credible information to improve or re-design it. Agencies with the capacity for rapid-cycle evaluation could likely conduct the outcome assessment component routinely at relatively modest cost. In contrast, a program previously studied or extensively piloted may be ready for definitive testing. Such an evaluation would include a rigorous impact study of long- and short-term outcomes—an RCT, a QE, or a rapid-cycle study covering a longer period. The evaluation would likely include other components such as a comprehensive cost analysis, particularly if the program model is costly, a fidelity assessment, if the model is demanding or imperative, and an implementation analysis, if multiple models exist.

It is useful to think about evaluation as a continuum of study with low to high levels of confidence related to program outcomes and their context. At one end of the continuum are implementation studies with limited objectives—often exploratory or motivated by narrow policy concerns. At the other end of the continuum are rigorous impact studies with complementary and confirmatory evaluation components to identify impacts and further make broader policy judgments. In between the low and high levels of confidence, studies of varying methods and rigor may provide the evidence to support program decisions, strategies, and practices.

### Exhibit 3.1.1: Types of Program Evaluation—Implementation Studies

<b>Purpose: An implementation study documents program operation or compares it against goals, across locations, or over time. It describes and analyzes “what happened and why” in the design, implementation, administration, and operation of programs.</b> <b>Data Requirements: A defined set of qualitative and quantitative program and participant data related to the topics covered in the study.</b>		
Type & Description	Practical Considerations	Cost & Rigor Considerations
<b>CASE STUDY</b> A study that provides a detailed examination of program operation and/or aggregate program outcomes at a single location. It may include fidelity or maturity assessments.	<ul style="list-style-type: none"> <li>• Single local program case studies—generally done because program is unusual (innovative and high-performing operation or a troubled, poor performing program)</li> <li>• Multiple case studies—generally done when objective is more broadly about program operations, including identifying best practices</li> <li>• Varied analytical components—sometimes purely descriptive; more often systematic comparisons which may include fidelity or maturity assessments</li> <li>• Case study findings—can be used to inform future program development or replication by describing program features that worked well and those that did not</li> </ul>	<ul style="list-style-type: none"> <li>• Relatively inexpensive, although costs depend on methods used, how many sites or programs, availability of pertinent data</li> <li>• Not rigorous from the standpoint of impact (assessment generally pre-post and small sample)</li> <li>• Can provide a valuable first step before moving on to more rigorous evaluations</li> </ul>
<b>FIDELITY STUDY</b> A study that compares program elements and operation measures to the program model or objectives, and involves determining if programs are implemented as designed or legislated.	<ul style="list-style-type: none"> <li>• As a stand-alone study—used to assess whether program operations are consistent with legislative intent, regulations, agency objectives, and/or program model</li> <li>• As a common component of comprehensive evaluations including impact studies at multiple sites— allows comparison of impacts at sites with high fidelity (operating the program consistently with intentions across all key elements) to those with lower fidelity</li> </ul>	<ul style="list-style-type: none"> <li>• Inexpensive and highly useful in many contexts</li> <li>• Does not assess impacts, so not judged to be rigorous or not in the usual sense of the term</li> <li>• An essential component of many impact evaluations</li> </ul>
<b>PERFORMANCE STUDY</b> A study that assesses program performance over time and involves assessing the progress made in scaling up and achieving program fidelity and smooth operations.	<ul style="list-style-type: none"> <li>• Generally used for new programs focused on a single program in one place or a few locations</li> <li>• Assessments address for example: fidelity and operational issues during infancy; scaling up processes (new programs often operate on a very small scale at first and begin to operate with greater fidelity and fewer problems at a larger scale as they mature)</li> </ul>	<ul style="list-style-type: none"> <li>• Low to moderate study costs</li> <li>• Low to relatively high study quality</li> </ul>
<b>SITE COMPARISON STUDY</b> A study that compares program operations across locations.	<ul style="list-style-type: none"> <li>• Generally used when study involves multiple related programs or a single program with many locations</li> <li>• Comparisons usually between program operation metrics and/or aggregate outcomes which may be considered performance measures</li> </ul>	

**Table 3.1.2: Types of Program Evaluation—Outcome Studies**

<b>Purpose: An outcome study compares individual outcomes against goals, across programs or locations, or over time.</b> <b>Data Requirements: All outcome studies require individual-level outcome data on the population or sample of interest. Longitudinal outcome studies need baseline data on characteristics of sample members and pertinent outcomes before and after program enrollment.</b>		
Type & Description	Practical Considerations	Cost & Rigor Considerations
<b>LONGITUDINAL STUDY</b> A study examining outcomes over time for specific cohort(s) of individuals. If focused on program participation, it may be called a process study. If assessing outcomes before and after program participation, it is called a pre-post outcome study, a less rigorous form of impact analysis.	<ul style="list-style-type: none"> <li>• Process analysis—addresses program participation by following a cohort (or cohorts) of applicants, accepted applicants, or enrollees through a program’s chain of outcomes—application, enrollment, assessment and/or orientation, program activities, and completion or graduation; typically produces metrics such as enrollment or participation rates, the proportions of enrollees who participate in certain kinds of activities, and completion rates</li> <li>• Pre-post analysis—assesses outcomes before and after program participation; common outcomes measured in workforce pre-post studies include employment rates, average wage rates, and measures of education and training achievement such as credentials obtained; tracking progress of individuals before, during, and after program participation is the best way to understand interim or short-term outcomes, allowing for the measurement of changes over time and description of participants before and after the program</li> <li>• Pre-post outcome studies may be a first step in developing an evidence base for a new intervention, laying the groundwork for a later, more rigorous impact evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Generally, longitudinal process studies superior to, and more expensive than, studies providing point-in-time outcome estimates</li> <li>• Pre-program longitudinal data can raise cost concerns, but program participation and immediate outcome data generally collected as part of workforce and education program performance tracking</li> <li>• Pre-post studies—a methodologically weak form of impact study, but a practical way to look at potential impacts; not as rigorous as an RCT or QE study, but less costly and shorter time period</li> </ul>
<b>CROSS-SECTIONAL STUDY</b> A study that analyzes the characteristics and outcomes for a population at a specific, single point in time, and may involve comparisons to goals or across programs, population subsets, or locations.	<ul style="list-style-type: none"> <li>• A common study of this kind—analysis of all individuals served in a state training during a given year whereby the analysis may involve any number of comparisons of outcomes (often “single point in time” comparisons) between groups or locations</li> <li>• Another common study of this kind—comparative analysis of outcomes to program goals to determine whether local programs have met performance objectives such as program graduates holding jobs at least three months</li> </ul>	<ul style="list-style-type: none"> <li>• Inexpensive to conduct given that data are readily available through routinely-collected program performance data</li> <li>• These studies provide insights, but not rigorous impact estimates</li> </ul>

**Table 3.1.3: Types of Program Evaluation—Impact Studies**

<b>Purpose: An impact study estimates the difference in individual outcomes attributable to a specific program or policy.</b> <b>Data Requirements: An impact study needs baseline data on the characteristics of sample members and on pertinent outcomes before random assignment or program enrollment, and follow-up data on pertinent outcomes after random assignment or program enrollment.</b>		
Type & Description	Practical Considerations	Cost & Rigor Considerations
<b>EXPERIMENTAL STUDY (RCT)</b> A study that uses an experimental research design, where individuals are randomly assigned to treatment and control groups and impacts are estimated as treatment-control differences in outcomes. An experimental study in the field of program evaluation is usually called a randomized control trial (RCT).	<ul style="list-style-type: none"> <li>• RCTs—clearest and most rigorous evidence of program effectiveness—you can say with confidence that the program made a significant difference and caused the change (i.e., scientific proof)</li> <li>• RCT assignment process—assignment to the treatment and control groups is random, therefore there are no systematic differences between the two groups, except for access to the program, and as a result, all measured differences in outcomes that occur after random assignment can be confidently attributed to the program</li> <li>• RCTs deny program access to a control group, making use controversial or infeasible, especially if adequate resources exist to serve entire eligible population</li> <li>• RCTs cannot be implemented retrospectively unless, prior to the evaluation, a lottery-like process has been implemented to allocate access to the program due to budget constraints; once random assignment has started, administrators must wait, possibly for many years, for impact results to become available</li> <li>• Must weigh the challenges of conducting an RCT against the value of the clear, rigorous evidence of program effectiveness that can be produced</li> <li>• RCT results: provide “proof of program effectiveness;” contribute to the evidence base; are valuable to workforce stakeholders and scholars in determining whether expected impacts were realized; and support development of approaches that build on the evidence to refine and expand programs</li> </ul>	<ul style="list-style-type: none"> <li>• Most rigorous form of impact evaluation—“gold standard”</li> <li>• Expensive, although costs can be contained through use of records data</li> <li>• Usually take multiple years to conduct (behavior insight studies are an exception)</li> <li>• Usually more challenging and expensive than other impact study options</li> </ul>
<b>QUASI-EXPERIMENTAL STUDY (QE)</b> A study that seeks to replicate an experimental research design using comparison groups, sites, or conditions with the goal of estimating a set of “counterfactual” outcomes to which the outcomes of the evaluated program’s eligible applicants or participants can be compared.	<ul style="list-style-type: none"> <li>• QE methods tend to be used for impact studies of relatively small and new programs; then, particularly if there are favorable impact results and the program becomes a larger enterprise, a RCT may be conducted</li> <li>• In general, maximizing QE study credibility involves: (1) identifying a comparison group that closely matches the program’s applicants/participants; (2) securing extensive data on pre-program outcomes for both the program and comparison groups; (3) using statistical matching techniques to select comparison group members; and (4) using statistical estimation methods for impact estimates that control for individual traits and pre-program differences</li> <li>• Unlike RCTs, QE studies: can often be implemented retrospectively; can be carried out without denying services to a control group; take less time; and are easier and less expensive to conduct</li> </ul>	<ul style="list-style-type: none"> <li>• QE methods such as CITS and RD—almost as rigorous as RCTs</li> <li>• QE methods—attractive alternatives to RCTs—take less time; are less obtrusive and expensive</li> <li>• CITS and RD—only feasible under certain conditions</li> </ul>

<b>Purpose: An impact study estimates the difference in individual outcomes attributable to a specific program or policy.</b> <b>Data Requirements: An impact study needs baseline data on the characteristics of sample members and on pertinent outcomes before random assignment or program enrollment, and follow-up data on pertinent outcomes after random assignment or program enrollment.</b>		
Type & Description	Practical Considerations	Cost & Rigor Considerations
	<ul style="list-style-type: none"> <li>• Comparative Interrupted Time Series (CITS), one of the most rigorous QE approaches—a viable option when a new program or substantial policy change is implemented suddenly for one location, but not for other locations with essentially the same population and economic conditions</li> <li>• Regression Discontinuity (RD), another rigorous QE design—can only be used in cases where eligibility for a program is determined by a count or score (such as hardship index or an education test score)</li> <li>• Other QE options—usually using comparison groups or sites—are less rigorous, but can be applied under a much wider range of evaluation circumstances</li> </ul>	
<b>RAPID- CYCLE STUDY</b> This is a system for continuously conducting impact and outcome studies using research methods similar to those of a comparative interrupted time series (CITS), a rigorous form of quasi-experimental (QE) analysis.	<ul style="list-style-type: none"> <li>• Rapid-cycle approach—involves creating a system for conducting numerous high-quality impact and outcome studies, wherein individual studies can be continuous (open-ended); once system is in place (software, data files, routine data updating and statistical procedures, other elements), studies can be completed at relatively low cost</li> <li>• Rapid cycle methodology—similar to CITS whereby studies detect significant changes in the trajectories of strings of outcomes after the introduction of a new program or policy—easy to repeat research procedure once the system is in place</li> <li>• Rapid-cycle studies—growing interest and use in recent years; potential for wide applicability, including evaluation of organization and system changes, new programs, altered policies to name a few</li> </ul>	Requires time and resources to put a system in place; once in place, high-quality impact and outcome studies can be carried out continuously at a relatively low cost
<b>THEORY-BASED STUDY</b> A study that is based on theory of change which involves mapping out the causal chain from inputs to outputs, outcomes and impacts, and testing the underlying assumptions linking these elements.	<ul style="list-style-type: none"> <li>• Theory-based studies—generally extend the use of a logic model</li> <li>• These types of studies do not produce impact estimates unless supplemented by an impact or outcome study, but can make a powerful case that impacts are taking place, including how and why</li> </ul>	<ul style="list-style-type: none"> <li>• Low to moderately high cost, the latter resulting from the inclusion of supplementary outcome and impact components</li> <li>• Persuasiveness of these studies depends on pertinent research (leading to the theory), data quality, and supplementary components</li> </ul>

**Table 3.1.4: Types of Program Evaluation—Cost Studies**

<b>Purpose: A cost study estimates program costs, makes cost comparisons, or weighs costs against outcomes or impacts.</b> <b>Data Requirements: All cost analyses require program cost and outcome information. Cost-effectiveness and benefit-cost studies also require results from impact or outcome studies and data from published sources.</b>		
Type & Description	Practical Considerations	Cost & Rigor Considerations
<b>COST-ANALYSIS STUDY</b> A study that makes cost comparisons (between programs, over time) or estimates cost changes resulting from changes in program features or inputs.	<ul style="list-style-type: none"> <li>• Cost analysis studies—dependent on what specific types of comparisons and statistical analyses can be done which are dependent on the program, and quality and detail of available cost data</li> <li>• Cost analysis studies—range from very modest cost-estimation exercises to sophisticated research projects involved in or separate from program evaluations</li> </ul>	<ul style="list-style-type: none"> <li>• Least expensive type of cost study unless it involves specialized, technically demanding analysis of cost issues</li> </ul>
<b>COST-EFFECTIVENESS STUDY</b> A study that compares the relative costs of similar programs in achieving a single outcome or impact.	<ul style="list-style-type: none"> <li>• Cost-effectiveness comparisons involve ratios—numerator is program cost and denominator is an outcome or impact of program or service provided</li> <li>• Common ratio calculation—numerator is gross cost of program in an accounting period (typically a year) and denominator is total number of outcome units achieved in same year</li> <li>• Limitations: (1) an outcome is not an impact, so lowest cost program producing a specific outcome may not be program providing “most bang for the buck;” can be overcome if net costs used in ratio numerator and impacts in denominator; (2) only one outcome or impact can be used in a single ratio, and programs often have more than one; can be overcome by comparing multiple ratios, by constructing an outcome with two dimensions such as trainees who receive a certificate and obtain a job in the field for which they were trained, or by using benefit-cost analysis; (3) program performance can only be judged in relation to other programs; can be overcome by using benefit-cost approach</li> </ul>	<ul style="list-style-type: none"> <li>• Low to moderate cost</li> <li>• Study quality depends on quality of outcome data (see outcomes studies above) and the appropriateness of cost-effectiveness comparisons</li> </ul>
<b>BENEFIT-COST STUDY</b> A study that assesses the economic value of a program by assigning dollar values to various outcomes and impacts and comparing the aggregate value of these items to program costs, including for example return on investment or pay for performance model assessments.	<ul style="list-style-type: none"> <li>• Benefit-cost analysis—designed to address multiple outcomes and impacts simultaneously; for most workforce evaluations, can only be done credibly using impacts measured through an RCT or QE design</li> <li>• Benefit-cost studies—monetize tangible program effects and allow for total benefits and costs of a program to be directly weighed against others in a manner analogous to comparing private sector revenues and costs—value of program as an investment judged by its net present value (analogous to private sector profit), internal rate of return (analogous to private sector rate of return), and benefit/cost ratio</li> <li>• Assigning dollar values—many workforce program outcomes/impacts such as participant earnings already denominated in dollars; dollar values must be assigned to others using well-defined methods; program costs and benefits occurring at different times must be converted to base-year dollars</li> </ul>	<ul style="list-style-type: none"> <li>• Most complete and rigorous type of cost study</li> <li>• Dependent on credible impact estimates, which usually requires a rigorous impact study</li> <li>• Low to moderate cost so long as there is good program cost accounting and credible impacts are available</li> </ul>



### 3.3 Create an Evaluation Timeline

A timeline for an evaluation plan creates a timeframe for critical evaluation activities, such as implementation of the evaluation design, data collection or report development and dissemination. As state workforce administrators and evaluation managers, you will want to set timeframes to give the selected evaluator opportunities to work with you to refine the evaluation design, develop research protocols and data analysis plans; and identify additional evaluation requirements, tasks and deliverables provided in a detailed timeline.

At a minimum, your preliminary planning activities will provide a timeline that demonstrates a clear overview of the:

- Type of evaluation to implement;
- Methodologies the study plans to employ;
- Tasks needed to conduct the evaluation;
  - Project management activities,
  - Deliverables produced
- Data resources and agreements needed to collect and analyze data;
- Interim and final report completion dates.

This section provides broad timing estimates for common tasks to consider in building your high-level evaluation plan timeline.

While every evaluation is unique, the table in Exhibit 3.2.1 provides examples of common evaluation tasks and associated activities with each task. The table also identifies calendar timeframe estimates for each of the common task examples. The type of evaluation, your agency plans to conduct, drives the tasks to include in a statement of work. Some of these tasks may or may not be appropriate for all research studies. Your agency may also identify other research or evaluation tasks and activities to include in the study requirements, or the selected evaluator may expand the activities needed for the identified study tasks in the evaluation design. The estimated timeframes in this table are general and just a starting point for your agency's consideration.

Note, the sample evaluation activities and timing in the Exhibit 3.2.1 table are organized into three distinct sections:

- Evaluation planning activities
- Evaluation start-up and implementation, and
- Reports and analysis.

Each task identified in the table also includes the associated section or sections for planning and implementing evaluations using this toolkit. Tasks in the table appear, as they would typically occur in evaluation implementation activities, although many tasks may be performed simultaneously.

### Exhibit 3.2.1: Sample Evaluation Activities and Timing

Task	Activities Associated With this Task	Who Is Responsible	Estimated Calendar Time
<b>Evaluation Planning Activities</b>			
<b>Logic Model Development (Section 4)</b>	<ul style="list-style-type: none"> <li>• Develop the logic model for the subject of your evaluation.</li> <li>• To evaluate a specific program or intervention in a logic model consider the following details: <ul style="list-style-type: none"> <li>◦ Program flow</li> <li>◦ Service delivery</li> <li>◦ Roles and responsibilities of partners</li> <li>◦ Data sharing activities</li> </ul> </li> </ul>	<p>State sponsoring agency</p> <p>State agency and program operator for specific program evaluation</p>	1-6 months
<b>Evaluation Planning (Sections 3, 4, 5, 6)</b>	<ul style="list-style-type: none"> <li>• Conduct meetings/discussions: <ul style="list-style-type: none"> <li>◦ Include relevant state officials and stakeholders</li> <li>◦ Identify overall evaluation goals and parameters</li> </ul> </li> <li>• Develop preliminary evaluation plan</li> <li>• Develop timeline and budget</li> <li>• Determine evaluator selection approach</li> </ul>	State sponsoring agency	2-6 months
<b>Evaluation Design Report, Including Data Analysis Plan (Section 4)</b>	<ul style="list-style-type: none"> <li>• Develop evaluation design report (EDR), including data analysis plan, for review/approval by state sponsoring agency.</li> <li>• Be sure to include data security and human subject protection protocols, obtaining Institutional Review Board (IRB) approval, and approval for surveys or other data collection needs, if needed.</li> </ul>	Evaluator	<p>1-3 months</p> <p>1-6 months</p>
<b>Evaluator Selection Process (Section 5)</b>	<p>Selection of an evaluator may vary considerably; consider most efficient or effective approaches for:</p> <ul style="list-style-type: none"> <li>• In-house unit; university or other partnership; third-party evaluator via RFP process</li> <li>• To select: <ul style="list-style-type: none"> <li>◦ Third-party evaluators - write and publicize the RFP; review applications; select winning bidder; finalize/sign contract.</li> <li>◦ Partnership configurations - identify partner, hold partnership development meetings, draft, negotiate and sign agreement.</li> </ul> </li> <li>• In-house evaluator - identify state unit and identify staff (FTEs) used.</li> </ul>	State sponsoring agency	1-6 months
<b>Evaluation Start-Up &amp; Implementation</b>			
<b>Develop Data Collection Protocols and Instruments (Section 4)</b>	<p>Varies depending on type of evaluation, research questions, and methods; examples include:</p> <ul style="list-style-type: none"> <li>• Interview and/or focus group guides</li> <li>• Site visit guides</li> <li>• Survey instruments</li> </ul>	Evaluator	1-3 months



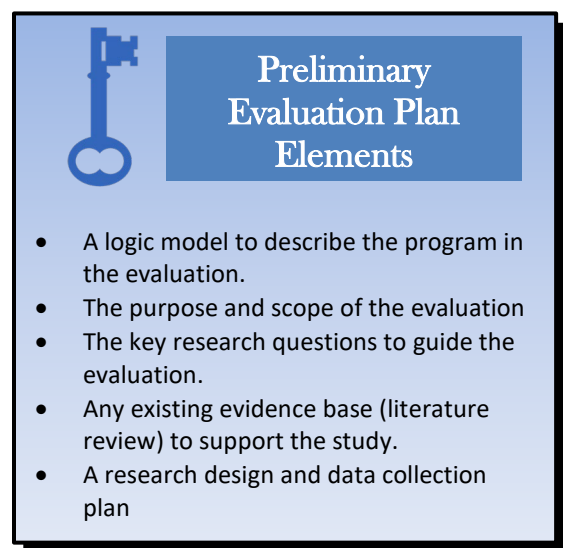
Task	Activities Associated With this Task	Who Is Responsible	Estimated Calendar Time
	<ul style="list-style-type: none"> <li>• Protocols, data sharing agreements, participant enrollment forms, random assignment protocols and related documents.</li> </ul>		
<b>Obtain IRB Approval, if needed (Section 3)</b>	<p>Depends on the type of study conducted, whether IRB approval becomes a factor for the timeline. Consider the following process activities:</p> <ul style="list-style-type: none"> <li>• Develop and submit informed consent, human study, and other privacy-related materials.</li> <li>• Estimate time allowed for review and approval.</li> </ul>	Evaluator with State Sponsoring Agency	1 to several months
<b>Data Collection (Section 4)</b>	<p>Consider the analysis needed, and:</p> <ul style="list-style-type: none"> <li>• Obtain existing program/administrative data (e.g., WIOA, wage records, post-secondary education records).</li> <li>• Obtain existing specific administrative data from program data systems.</li> <li>• Conduct telephone interviews, site visits, focus groups, and other qualitative research; synthesize information/write internal reports for each interview, focus group, and site visit.</li> <li>• Conduct surveys; compile and synthesize response results</li> <li>• Collect program participant data for pre-post outcome/RCT studies</li> </ul>	Evaluator	6 or more months, for multi-year studies, multiple rounds of data collection
<b>Progress Reports (Section 4)</b>	Evaluator submissions scheduled as required by state sponsoring agency (e.g., monthly, quarterly)	Evaluator	1 day per period
<b>Interim Reports (Section 4)</b>	<ul style="list-style-type: none"> <li>• Check data for quality and comprehensiveness</li> <li>• Analyze data collected, to date</li> <li>• Write and revise (as appropriate) report based on state sponsoring agency feedback on draft</li> </ul>	Evaluator State sponsoring agency review and feedback of draft	3-4 months
<b>Final Report (Section 4)</b>	<ul style="list-style-type: none"> <li>• Check data for quality and comprehensiveness</li> <li>• Analyze all data collected during evaluation</li> <li>• Write and revise (as appropriate) report based on state sponsoring agency feedback on draft</li> <li>• Publish report as required by WIOA</li> </ul>	Evaluator State sponsoring agency review and feedback of draft; publish report	3-4 months
<b>Public Use Data Set (Section 4)</b>	If “original data are collected,” a public use data set is standard protocol. Check data for quality and comprehensiveness; remove all PII (e.g., names, social security numbers, and addresses); write comprehensive codebook (i.e., a guide describing each of the variables in the data set)	Evaluator State sponsoring agency publish data set	2–6 weeks

## 4. Develop an Evaluation Design Plan

This section outlines the key elements for creating a preliminary evaluation plan—the critical first step in designing and conducting an evaluation, regardless of the methods used. The preliminary plan defines the requirements for both developing and implementing a well-designed evaluation. Well-designed evaluations include clearly identified and articulated key research questions. Clearly articulated research questions, in turn, help to determine the study methods and data collection and analysis used to answer them.

Depending on who conducts the evaluation (see Section 5), the preliminary plan also called a “statement of work” leads the evaluation planner either to:

- Prepare a Request for Proposals (RFPs) to procure an independent, third-party evaluator,
- Provide guidance to an in-house evaluator, or
- Develop a partnership agreement with a university or other organization.



**Preliminary Evaluation Plan Elements**

- A logic model to describe the program in the evaluation.
- The purpose and scope of the evaluation
- The key research questions to guide the evaluation.
- Any existing evidence base (literature review) to support the study.
- A research design and data collection plan

Once selected or procured, the evaluation planner and the evaluator jointly administer and implement the requirements to conduct the evaluation.

### 4.1 Develop the Logic Model

It is a good idea to begin the preliminary evaluation plan with a logic model. A detailed logic model may not be necessary, particularly if the focus of the study is narrow rather than comprehensive. Even if the study focuses on a program activity of strategy, a simple logic model delineates program inputs, outputs, activities, and outcomes.

**Importance of a Logic Model:** A logic model relies on a specific “theory of change.” Examining the logic underlying a program (program, system, strategy, service, activity, or intervention) clarifies the subject matter and context of the evaluation. For example, within a logic model, program implementation describes the inputs and outputs, and the program results expressed as outcomes and impacts. The logic model description is a detailed account of the program’s content and organizational structure, size, flow, staff support, the amount of staff training required to implement it, and the services provided or system change activities undertaken. It may also contain a clear depiction of the relationships between program elements and the intermediate- and long-term outcomes those elements

are expected to affect. A well-designed logic model serves as a blueprint for the implementation and evaluation of the program it describes.

**Components of a Logic Model:** A complete logic model addresses the key components of a program, including inputs and activities, outputs, and (both, intermediate- and long-term-) outcomes. If more than one program or method of service delivery or process exists, then it may also be appropriate to develop two or more logic models. For example, to evaluate a change management intervention along with an existing training program, consider how those two aspects the program operate and depict the constructs in two different logic models. Inputs, outputs, activities, and outcomes are common to all logic models; however, these components also describe how a program operates or set expectations in the theory of change.

Key components in logic models are **inputs** and **activities** used to operate a program. The logic model components are the ingredients in the program implemented to achieve the desired outcomes. The key components—essential activities and inputs—may include, for example, financial resources, professional development for trainers, curricular materials, or technology products. The inputs and activities describe the program in action and summarize the required operations to attain fidelity to the model. Regardless if the logic model is linear or non-linear, at a minimum; it identifies the basic operational standards and structure in graphic form organized to demonstrate how the outputs lead to the program's intermediate- and longer-term outcomes.

**Outputs** are products developed, or deliverables completed, or milestones accomplished from the program activities and inputs. In other words, program outputs occur when the inputs and activities accomplish the intended objectives. Some examples of workforce program outputs include:

- Participant services (e.g., skill assessments, occupational training) delivered,
- Training/professional development activities or other supports for trainers (e.g., group training, on-site coaching, distance training, curriculum materials) completed,
- Instruction or skill development (e.g., technology, formative assessment(s), use of instructional time, participant groupings) completed,
- Participant, employer, and community engagement activities completed, or
- Coaching, advising, or referrals developed and delivered.

**Intermediate outcomes** are the expected program service delivery milestones or goals achieved that can lead to long-term outcomes. A logic model includea all of the intermediate outcomes through which you expect the program to affect participant long-term outcomes. Note, that outputs and intermediate outcomes of workforce programs are often the same.



### Benefits of a Logic Model

- Maps program management operations— identifies inputs, activities, outputs and outcomes used to measure successful or achieved objectives.
- Serves as a blueprint for the implementation and evaluation of the program, strategy, service or intervention studied.

Some examples include:

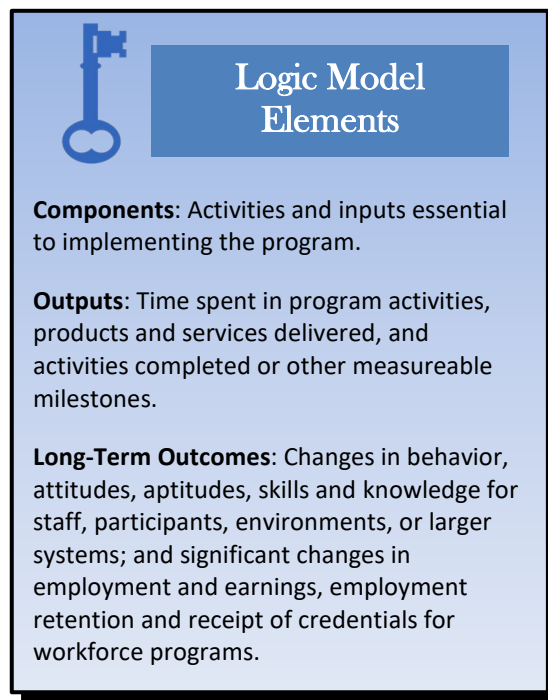
- Training program completions,
- Participant credentials,
- Participant job placements,
- Number of overlapping services reduced, and
- Number of complete records entered into new MIS.

**Long-term outcomes** include the expected changes in behavior, attitudes, aptitude/skill, and knowledge for staff, participants, environments, or larger systems. Most importantly, workforce programs include changes in employment and earnings, employment retention, and the receipt of credentials as part of long-term outcomes. All outcome domains that the program is expected to affect should be included in the logic model.

**Logic Model Example:** Logic models can be described in various formats: visual/graphical, tabular, and narrative. However, a graphical portrayal is most effective when combined with a detailed narrative description. Figure 4.1 provides an example of a graphic representation of a logic model based on a simple intervention that offers a training program for a specific type of machine operator. The inputs listed in the left-hand column include space to hold the training sessions, eligible students, instructors to teach the sessions, materials, and partners who will provide slots for internships during the course of the training.

The next column shows the activities conducted in the program. These activities include conducting the training course, advising the students on internships, and connecting regularly with employers regarding the internships. The outputs are completing the delivery of the training course, including the use of the intended curriculum, and placement of students in internships simultaneous to the training. In this example, intermediate outcomes are students actually attending and completing the series of sessions, earning the related degree or credential, and successfully completing the internship placement. Long-term outcomes include employment in the target industry, and higher earnings and obtaining jobs with benefits.

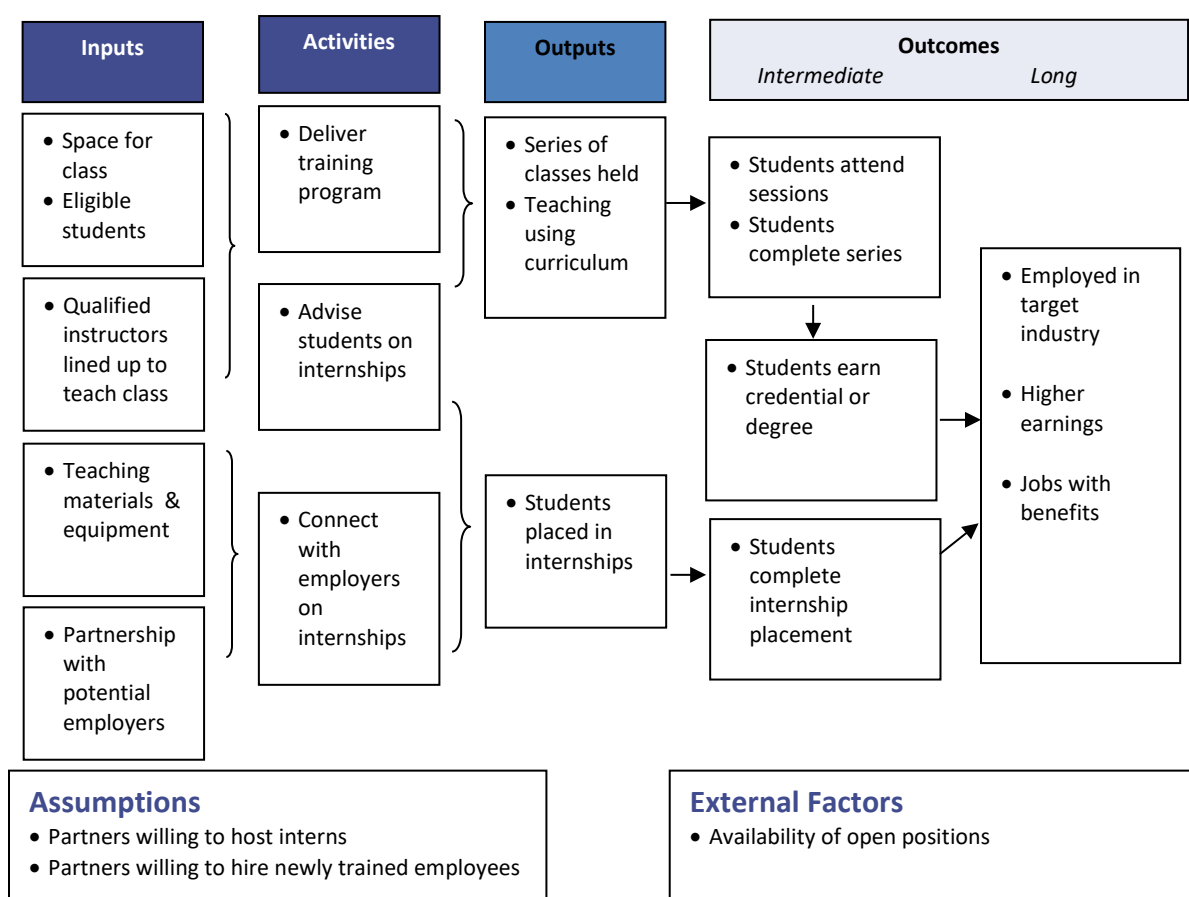
This logic model example also includes a space for assumptions made, as well as, any external factors that may bear on the intermediate- and long-term outcomes. The assumptions and external factors in logic model provide context for the program's evaluation. Assumptions, for the program in this example, include the ability to secure employment partners committed to offering internships and entry-level positions for students. An external factor that may affect the evaluation is the availability of the



appropriate open positions for the students who complete the program. Such external factors are often rely upon existing knowledge of employment trends in the industries that hire machine operators.

Lastly, this example illustrates the inputs linked to activities; identifies the activities linked to specific outputs, and the outputs linked to specific outcomes. Rather than just a long list of each program component without logical paths, the added arrows show which inputs and activities have an expected affect which outputs and outcomes. A clear understanding of the expected affects allow creates a more defined evaluation plan and, when needed, provides an opportunity to refine the study and articulates the expected results based upon the reality of program operations.

**Figure 4.1: Graphic Logic Model Example—Machine Operator Training Program**



**Logic Model Creation and Refinement:** The blank logic model template found in the **Appendix F**, is a template to create a graphically displayed logic model for your evaluation. While you may want to develop both a graphical logic model and narrative description, the graphical template will enables you to identify the essential elements. Once you develop an initial logic model, refine and assess its comprehensiveness, or modify it to meet your program evaluation needs. The self-assessment questions in Exhibit 4.1, allow you to further refine or modify components or elements of the logic model as you address the gaps identified in the responses to these questions.

## Exhibit 4-1: Logic Model Questions

Self-Assessment of Program Logic Models: Discussion Questions	
1.	Does the model include critical inputs required for the implementation of the service activities? (e.g., accessible technology and other resources, program partner services, staffing, coaches, case managers, recruiting and training trainers, and partners with training services, credentialing, work-based learning opportunities)
2.	Are there system-building activities that are part of the necessary foundation for the program? Are these system-building activities part of the logic model?
3.	Does the model include all of the current activities provided to participants? Is there an existing or expected sequence of participant activities that follows a logical path or pattern?
4.	Does the model include all of the “first-level outputs” of the program? (For example, measureable milestones that are necessary but not sufficient conditions for achieving outcomes such as full participation, use of supportive services, and meetings with coach/advisor.)
5.	Does the model include all of the hypothesized immediate changes and/or outcomes expected for participants, across all relevant domains?
6.	Are these immediate changes and/or outcomes an assumed result of specific services?
7.	Does the underlying theory of the program design identify expected participant outcomes for particular services?
8.	Does the logic model suggest links between intermediate- and longer-term outcomes?
9.	Are the longer-term participant outcomes likely to be measurable in the life of the evaluation?
10.	As a complete visual or narrative text, does the logic model tell a clear and complete story about the unique program, service strategy or intervention in the study?
11.	If the logic model assumes a theory of change, how does the hypothesis to lead to moderate and long-term outcomes?
12.	If using a visual representation, does supplementary narrative text provide a clear and complete story?
13.	Are there assumptions about external conditions or other external factors that could affect the successful implementation of the program?
14.	Are these identified external conditions or other external factors shown in the model?
Questions taken and modified from the WIF Toolkit developed by Abt Associates.	

## 4.2 Determine the Evaluation Purpose and Scope

A critical element of all preliminary evaluation plans requires a clearly articulated **purpose and scope**. Stakeholders, partners, and where informed consent is used, customers need to understand **what is being researched or studied and why**. Identifying an initial set of research questions leads to the purpose and scope of the evaluation. Some general research questions include:

- What are the program processes used for the services provided?
- Does the menu of services provided meet the intended program objectives or goals (for example, employment and increased wages for customers)?
- Do particular services result in better outcomes than other services (for example, do participants who receive an “extra” package of services have higher earnings or longer retention rates than those who receive the “standard” package of services)?
- Do you want to know if your statewide career pathways system is helping or hindering institutions in making a difference for students and workers?

A clearly articulated evaluation purpose and scope helps with stakeholder support as the evaluation activities begin to take place. Stakeholders, such as government executives, legislators, and workforce boards, in turn, can share the evaluation’s purpose and its potential benefits with other involved or interested community members or agency partners. Early stakeholder engagement in the process encourages and adds different perspectives that can fine-tune the purpose of the evaluation. In addition to further fine-tune the evaluation purpose; use the program’s logic model as a reference to ensure that all aspects of the program and intended outcomes or impacts are considered.

In addition to the purpose of the evaluation, the **scope of the evaluation—which program component(s) to evaluate and how** is called a statement of work and sets for parameters for the study. The evaluation scope allows the evaluation planners to identify preliminary quantitative and qualitative data collection methods. For example, existing administrative data sets that document certain program components can support quantitative analyses. On the other hand, other program or service delivery strategies can support qualitative data collection methods, such as interviews, document reviews, and focus groups.

For example, the effects of a program’s occupational training component on participant employment rigorously assessed in an impact study rely data gathered to measure the amount and types of services provided, characteristics of participants receiving the services, and follow-up data on employment through established surveys or administrative records. On the other hand, the effects of a program’s soft skills component because the intermediate outcomes (such as, self-awareness or interpersonal relationships, and longer-term outcomes such as, community involvement or return on investment) use long-term and intensive follow-up surveys. Nevertheless, less rigorous evidence from focus groups with leadership, class teachers, and participants may also add exploratory value to the evaluation.



The scope of an evaluation study also involves other specific considerations that are dependent on the type of evaluation you plan to conduct.

- **Impact and Outcome Studies.**
  - Sites or areas—determine specific program sites and/or geographic areas to include/use in the study.
  - Target population—the population serve in a program such as, adults or youth; wherein, the individuals actually served are a subset of the target population; and the sample studied also is a subset of the target population.
  - Outcomes addressed—the outcomes measured to demonstrate changes or successes.
  - Observation period—the observation (or follow-up) period extends from the beginning to the end of longitudinal data collection on sample members; wherein, the length of this period is usually measured in years, quarters, or months of follow-up available on all cohorts in the sample.
- **Implementation and Cost Studies.**
  - Sites or areas—determine specific program sites and/or geographic areas to include/use in the study
  - Elements addressed—the program elements examined to determine fidelity to the model.
  - Timing and length of study—the effects of program implementation or costs assessed during program planning, development, early operation, or maturity.

While some of the following considerations listed are included as part of studies above, the decision on the type(s) of studies to conduct are dependent on the key research questions identified for the evaluation plan.

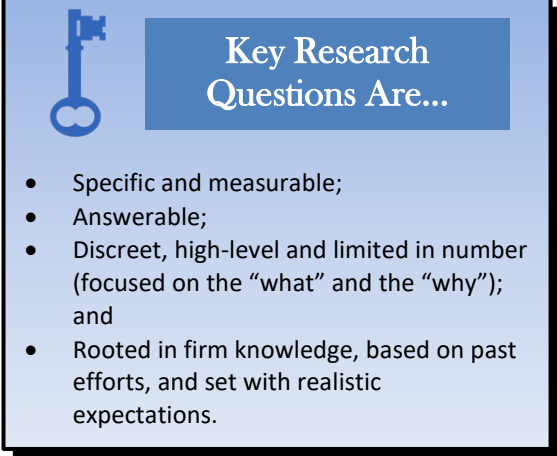
### 4.3 Develop the Key Research Questions

The **key research questions that will guide** your evaluation plan require input from stakeholders. Research questions identify distinct workforce system or program areas to assess in a systemic and credible way. Key research questions share the following characteristics.

- **Specific and Measurable.** The questions identify the specific elements or outcomes to examine and learn about those elements. For example, a specific research question may ask: “Are participants who complete the program in its entirety more likely to be placed in full-time unsubsidized jobs than those who do not complete the program within three months after program exit?” The trends in employment data available may support an outcome study using participants’ post-program data from employers to answer this question. However, UI records available may support an impact study using the unemployment data for both participants and a comparison group at certain points in time. Thus, the research question introduces other possible data collection opportunities.



- **Answerable.** Key research questions must be answerable. Some research questions may not be answerable because data may not exist to answer the question or the outcome of interest may need further definition. For example, workforce program managers may have an interest in impacts of services on participant self-sufficiency. However, self-sufficiency does not have a standard unit of measurement and may mean different things to different people. To answer this question, the evaluation planners, with stakeholder input may want to define the term, self-sufficiency; and identify observable measurement units. Research questions with outcomes not clearly measurable may also require additional consultation with the selected evaluator.



**Key Research Questions Are...**

- Specific and measurable;
- Answerable;
- Discreet, high-level and limited in number (focused on the “what” and the “why”); and
- Rooted in firm knowledge, based on past efforts, and set with realistic expectations.

- **Discreet, High-Level, and Limited in Number.** In general, key research questions should be discreet, meaning that they do not overlap one another. Typically, key research questions written at a relatively high level and are few in number. A limited number of research questions help you stay focused on the “what” and the “why” of your state agency-sponsored evaluation; and help you clearly articulate the scope of the evaluation to stakeholders, customers, and other interested partners. The selected evaluator will examine the key research questions, explore their relevance to the study, and develop a more discreet set of questions tied to methodology.
- **Rooted in Firm Program Knowledge and Realistic Expectations.** Strong research questions are rooted in firm program knowledge; based on understanding past similar efforts with demonstrated program results; and set with realistic expectations a study that addresses the research questions and explains how it will be achieved.

## 4.4 Review the Existing Evidence Base

A preliminary evaluation plan follows, once the logic model(s), the purpose and scope, and draft key research questions are complete. A key component of the preliminary evaluation plan is a literature scan or review of the existing research-based evidence related to the subject of your evaluation. The identified research-based evidence provides a foundation for your evaluation plan and design because it provides useful, timely information, because it justifies how your study will build upon the current knowledge base. The existing evidence will help you with the following aspects of the plan:

- Refine the evaluation purpose, scope, and key research questions by building off of and improving upon the existing evaluation work that has been done
- Determine what aspects of the program to evaluate using which evaluation design, data sources, and methodology by looking at how components of other similar programs, systems, strategies, services, activities, or interventions were evaluated
- Identify appropriate outcomes and how best to measure or otherwise assess them

- Ensure that your evaluation builds upon the existing evidence and contributes additional information to the current base of evidence (i.e., your evaluation goes beyond what has already been done and sheds new light on the issues/questions)
- Consider how to best integrate evaluation-related activities into program operations
- Look ahead to how you may want to disseminate and inform others of your eventual evaluation results

The **evidence review, also called a literature review or scan**, includes references to scholarly studies of programs, systems, strategies, services, activities, or interventions similar to your proposed evaluation of a workforce system program. In particular, evaluations of other job training programs, work-based learning or statewide career pathway systems may be organized and summarized according to how those findings from each study relate to your evaluation plans. In addition, the literature review or scan includes the:

- Studies' methods such as,
- Overall design and level of rigor,
- Types of data collected, data collection and analysis methods used,
- Implementation processes observed, and
- Research findings and recommendations of interest.

When this level of information is not available in a study's public report, your literature review or scan can also document the missing elements of the evidence gathered. The evidence base collected for the subject of your evaluation may not be limited to exact replicas of your program or elements thereof. You may want to research subjects or topics *related* an area of study that apply to your evaluation plan. For example, research on programs that serve different populations, and with some similarity or variation in design or services, may be useful for your evidence base.

Scholarly evidence sources and publications are available on Federal research and state agency websites, in peer-reviewed journals, and on the research and evaluation websites of universities, non-profit foundations or professional evaluation firms. Although there is no centralized database of state-conducted evaluations, the NASWA report (NASWA, February 2017) identifies recent research areas pursued by states. Another form of evidence review that is of particular use, are meta-analyses. A meta-analysis is a quantitative statistical analysis of several separate but similar experiments or studies in order to test the pooled data for statistical significance. For workforce development evaluations, there are several primary sources of studies listed in Table 4.2.

## Exhibit 4.2: Key Sources for Finding Workforce Evaluation Research Studies


Sources	Descriptions and Hyperlinks
<b>DOL, Chief Evaluation Office (CEO)</b>	<p>The CEO coordinates, manages, and implements the DOL evaluation program, working closely with all offices and agencies throughout the Department. While offices/agencies conduct their own studies, CEO often commissions or conducts studies on their behalf, including many involving the workforce system on behalf of ETA. CEO maintains the following facilities for researching studies.</p> <p><b>Clearinghouse for Labor Evaluation and Research (CLEAR):</b> This is a searchable database of identified and summarized studies assessed for quality by the CEO. Database includes all types of studies, including those not conducted by DOL. <a href="https://clear.dol.gov/">https://clear.dol.gov/</a></p> <p><b>CEO Completed or Current Studies:</b> The CEO maintains these two lists of studies they have commissioned/conducted that provide links to study reports and other information. <a href="https://www.dol.gov/asp/evaluation/CompletedStudies.htm">https://www.dol.gov/asp/evaluation/CompletedStudies.htm</a> and <a href="https://www.dol.gov/asp/evaluation/CurrentStudies.htm">https://www.dol.gov/asp/evaluation/CurrentStudies.htm</a></p>
<b>DOL, Employment &amp; Training Administration (ETA)</b>	<p><b>Research Publication Database:</b> This database provides access to a collection of research and evaluation reports commissioned by ETA to help guide the workforce system in administering effective programs. The searchable database includes studies back to 1995. ETA also provides an annotated bibliography that summarizes selected research publications. <a href="http://wdr.doleta.gov/research/eta_default.cfm">http://wdr.doleta.gov/research/eta_default.cfm</a></p> <p><b>Workforce System Strategies (WSS):</b> WSS provides a collection of resource profiles supported in ETA's TA platform, WorkforceGPS. The profiles summarize reports, various evaluation studies (beyond DOL/ETA studies), TA tools, and guides (evaluation and other types of guides and tools). While not targeted to only evaluation studies, it is key word and topic searchable. <a href="https://strategies.workforcegps.org/">https://strategies.workforcegps.org/</a></p>
<b>Department of Education, Institute of Education Sciences (IES)</b>	<p><b>IES What Works Clearinghouse (WWC):</b> This entity reviews existing research on different programs, products, practices, and policies in education to provide educators with the information they need to make evidence-based decisions. The "Review of Individual Studies" tab on the home page provides a searchable database of reviewed studies. <a href="https://ies.ed.gov/ncee/wwc/">https://ies.ed.gov/ncee/wwc/</a></p>
<b>Department of Health &amp; Human Services, Administration for Children &amp; Families (ACF)</b>	<p><b>Office of Policy, Planning, Research, and Evaluation (OPRE) Research &amp; Evaluation Clearinghouses:</b> In addition to conducting studies on ACF programs and populations served, OPRE conducts systematic reviews of the evidence and maintains several research clearinghouses (searchable databases) organized by major topic areas. The topical clearinghouses include: self-sufficiency, employment strategies for low-income, strengthening families, home visiting, and childcare and early education. <a href="https://www.acf.hhs.gov/opre/research-and-evaluation-clearinghouses">https://www.acf.hhs.gov/opre/research-and-evaluation-clearinghouses</a></p>
<b>U.S. Government Accountability Office (GAO)</b>	<p><b>GAO Study Reports Database:</b> GAO is an independent, nonpartisan agency that works for Congress, and in general, investigates how the federal government spends taxpayer dollars. Studies generally of most interest to workforce evaluators include those that involve: auditing agency operations to determine whether federal funds are spent efficiently and effectively; and reporting on how well government programs and policies meet their objectives. To research its database, use the "Reports &amp; Testimonies" tab and either browse by category or use the keyword/advanced search capability found at the top of the webpage. <a href="https://www.gao.gov/">https://www.gao.gov/</a></p>
<b>Key Journals for Workforce Research</b>	<p><i>Journal of Labor Economics</i>, <i>Social Science Review</i>, and the <i>Journal of Public Policy and Analysis</i></p>

## 4.5 Determine the Research Design and Data Collection Approach

Once you decide on the evaluation purpose and scope, review and document an understanding of the evidence base, and refine your key research questions accordingly, the next task for the preliminary evaluation plan is to determine the research design (methods) and approach to data collection. A number of factors apply to the decision-making processes for research design and data collection approaches, such as the following:

**Methods to Most Accurately Answer Your Key Research Questions:** Some questions, such as who is participating in your program and the characteristics of their participation, may be best answered with an implementation or descriptive outcomes study, whereas other questions about the effectiveness of your program are likely to be best answered with a pre-post outcomes study, RCT, or QE study. In some cases, you may want to conduct a study that includes several types of evaluation. For example, often an outcome or impact study will also include an implementation and/or cost study component. The key guiding factor in making your final choice of study design is *what* you want to learn and why, and how sure you want to be about the findings.

**Organizational Capacity to Participate the Evaluation:** Consider how the evaluation activities will blend into the implementation activities of the program, system, strategy service, activity, or intervention included in the study. Discuss the feasibility and options to carry out and participate in the selected evaluation with organization or agency managers or operators that implement the subject or topic of the study. Include other key stakeholders and partners to identify their organizational capacity to participate. For example, RCT evaluations of service delivery interventions integrates a random assignment process into the participant intake and enrollment processes that may span across multiple partners or service providers. Each partner engages in discussions and negotiates agreements to participate in the evaluation.



**Research Design & Data Collection Approach Factors**

- Methods to most accurately answer your key research questions
- Organizational capacity to participate in the evaluation
- Organizational capacity to conduct the evaluation
- Data availability for the desired type of evaluation or capacity to collect it

**Organizational Capacity to Conduct the Evaluation:** The selection process for an evaluator (see Section 5), also employs the state's capacity to conduct the evaluation. While funding may be a key driver to building evaluation capacity, investments in evaluation management development, staff training, strategic and long-range planning, budgeting, and technical assistance are key elements. Each of these elements support organizational evaluation capacity, whether the evaluators conduct in-house studies, partnerships are formed with research universities to manage administrative data, or third party evaluators are procured to conduct independent evaluations. Section 3 includes the cost and rigor considerations for thirteen different types of implementation, outcome,

impact, and cost studies. Given the numerous research and evaluation approaches available for state workforce agencies use, organizational capacity and costs for evaluations can also vary greatly.

**Data Availability for the Desired Type of Evaluation or Capacity to Collect It:** In addition to a final determination of evaluation type, or combination thereof, for the evaluation plan, you and the selected evaluator will finalize the details to conduct and carry the research—**research design (methods) and data collection approach**. The type of evaluation and the key research questions will present different methods, data sources and data collection options. **Data availability or your capacity to collect it is a critical factor** to the type of evaluation to conduct. The selected evaluator will refine the study methodology and data collection approach; however, as part of the state evaluation planning process, data availability and capacity to house, transmit, and secure the data must be addressed to put the evaluation on the right track. How the data needs are identified and resolved within the context of the evaluation methodology allow you to work most effectively with your selected evaluator—in-house unit, partner university/organization, or third-party entity. The table in Exhibit 4.3 provides a broad snapshot of data requirements and sources for the four major types of evaluation, followed by additional considerations.

**Exhibit 4.3: Data Requirements and Sources for Various Types of Evaluation**

Impact Studies	Outcome Studies	Implementation Studies	Cost Studies
<b>Requirements</b>			
An impact study needs baseline data on the characteristics of sample members and on pertinent outcomes before random assignment or program enrollment. It also requires follow-up data on pertinent outcomes after random assignment or program enrollment.	All outcome studies require individual-level outcome data on the population or sample of interest. Longitudinal outcome studies need baseline data on the characteristics of sample members and on pertinent outcomes before and after program enrollment.	An implementation study requires a defined set of qualitative and quantitative program and participant data related to the topics covered in the study.	All cost analyses require program cost and outcome information. Cost-effectiveness and benefit-cost studies also require results from impact or outcome studies and data from published sources.
<b>Sources</b>			
Program records on sample members, activities and outcomes; automated records data on outcomes; and survey data on sample members, activities, and outcomes.	Observation and interviews at program locations.		Program financial records, published cost data, and impact and outcome studies.

- **All Impact Studies and Most Longitudinal Outcome Studies.** Impact and outcome studies require individual-level data on sample members' characteristics and on their outcomes before, during, and after program participation. The samples are collected from cohorts in the target population and, if the study is to be generalized to that

population, may ideally be randomly drawn. The data for the treatment and control or comparison groups in impact studies must consistently be collected from the same source. The source may be longitudinal surveys, program records, and/or automated records, such as earnings records from the Unemployment Insurance (UI) system and postsecondary education and training information from the National Student Clearinghouse.

- **Implementation Studies.** These require data collected in the field about the program being evaluated. These data are obtained through observation, field interviews with program staff and other actors, and program documents. They also frequently use outcome data, although these are usually aggregate data rather than the individual-level data used for outcome and impact studies.
- **Cost Studies.** These use financial data from and, particularly for cost-effectiveness and benefit-cost analyses, selected results from outcome, impact, and implementation studies. They also use published cost and outcome data for several aspects of the studies, notably including the development of unit-cost estimates.

## 4.6 Preparing the Preliminary Evaluation Plan

The following table in Exhibit 4.4 is designed to help you further think through your evaluation approach and prepare your preliminary evaluation plan. Your plan should include a discussion of the following elements:

- The logic model
- Purpose, scope, and key research questions
- Evidence base (you may want to make this a separate document or provide a summary in the plan with details provided separately)
- Evaluation type(s) demonstrating your understanding of that kind of evaluation, the feasibility of carrying it out, and why it is appropriate for your proposed study
- High-level determinations concerning research design (methods) and data sources/data collection, recognizing that your selected evaluator will address the specific methodological details
- If your study needs to address protecting participants' rights (depends on type of evaluation; see Section 3.6 for a discussion of this aspect of evaluation planning)

The following additional considerations will need to be factored into your plan:

- **Budget Considerations.** Upon going through the planning process, the resulting plan may be ideally what you want, but may be too costly in relationship to the funds you have to spend on it. The plan, in terms of the type of evaluation and research design (methods and data collection) you contemplate using, may need to be modified.
- **Timeline Considerations.** You may need to conduct the evaluation as soon as possible for any number of reasons, or have the luxury of time. Either way,

establishing a general timeline will be needed. Section 3 provides information that can help you estimate the calendar time for various evaluation activities.

- **Protecting Participant Rights Considerations.** If the type of evaluation you anticipate conducting requires going through the Institutional Review Board (IRB) process, the calendar time it takes could be considerable, and the process has cost implications to be factored into your plan. Section 6 provides information on the IRB process that can help you make plan adjustments accordingly.



**Exhibit 4.4: Key Elements for Evaluation Planning**

Key Elements	Impact Studies	Outcome Studies	Implementation Studies	Cost Studies
<b>General Purpose</b>	An impact analysis estimates the difference in individual outcomes attributable to a specific program or policy.	An outcome study compares individual outcomes against goals, across programs or locations, or over time.	An implementation study documents program operation or compares it against goals, across locations, or over time.	A cost analysis estimates program costs, makes cost comparisons, or weight costs against outcomes or impacts.
<b>Study Purpose</b>	Specific purpose statement(s) aligned with overall purpose of the type of study—impact, outcome, implementation, and/or cost.			
<b>Study Scope</b>	<ul style="list-style-type: none"> <li>• Sites or areas</li> <li>• Target population</li> <li>• Outcomes addressed</li> <li>• Observation period</li> </ul>	<ul style="list-style-type: none"> <li>• Sites or areas</li> <li>• Target population</li> <li>• Outcomes addressed</li> <li>• Observation period</li> </ul>	<ul style="list-style-type: none"> <li>• Sites or areas</li> <li>• Elements addressed</li> <li>• Timing and length of study</li> </ul>	<ul style="list-style-type: none"> <li>• Sites or areas</li> <li>• Elements addressed</li> <li>• Timing and length of study</li> </ul>
<b>Types of Key Research questions</b>	Hypotheses based on a review of evidence base	Questions to assess whether the program is meeting its objectives	Questions to assess program delivery process such as: <ul style="list-style-type: none"> <li>• How is it operating?</li> <li>• Is it operating as planned?</li> <li>• Level of participation?</li> </ul>	Questions to assess program costs such as: <ul style="list-style-type: none"> <li>• What is the cost?</li> <li>• Is program cost-effective?</li> <li>• Is it a good investment?</li> </ul>
<b>Analysis Approach</b> (see Section 6.2 for more on data analysis plan)	<ul style="list-style-type: none"> <li>• Research design <ul style="list-style-type: none"> <li>◦ Experimental</li> <li>◦ Quasi-Experimental</li> <li>◦ Rapid Cycle</li> <li>◦ Theory-Based</li> </ul> </li> <li>• Sampling methods and sampling frame</li> <li>• Statistical methods (tests by which impacts are determined to be statistically significant)</li> </ul>	<ul style="list-style-type: none"> <li>• Research design <ul style="list-style-type: none"> <li>◦ Longitudinal</li> <li>◦ Cross-Sectional</li> </ul> </li> <li>• Sampling methods and sampling frame</li> <li>• Statistical methods</li> </ul>	<ul style="list-style-type: none"> <li>• Research design <ul style="list-style-type: none"> <li>◦ Case Study</li> <li>◦ Fidelity Study</li> <li>◦ Performance Study</li> <li>◦ Site Comparison Study</li> </ul> </li> <li>• Qualitative research methods such as interviews, focus groups, document reviews, observations</li> </ul>	<ul style="list-style-type: none"> <li>• Research design <ul style="list-style-type: none"> <li>◦ Cost Analysis</li> <li>◦ Cost-Effectiveness</li> <li>◦ Benefit-Cost</li> </ul> </li> <li>• Statistical methods</li> <li>• Cost research methods</li> <li>• Cost items and considerations such as staff time, budget aspects expected to be changed, total costs and cost breakdowns of interest</li> </ul>
<b>Data Collection/Data Sources</b>	<ul style="list-style-type: none"> <li>• Survey data collection</li> <li>• Records</li> <li>• Other data collection</li> </ul>	<ul style="list-style-type: none"> <li>• Survey data collection</li> <li>• Records</li> <li>• Other data collection</li> </ul>	<ul style="list-style-type: none"> <li>• Field data collection such as interviews or focus groups, program observations</li> <li>• Record reviews such as program documents, data on participation and completion</li> <li>• Other data collection</li> </ul>	<ul style="list-style-type: none"> <li>• Cost data collection</li> <li>• Records such as internal financial records or databases, program records and budgets, other administrative data</li> <li>• Other data collection</li> </ul>

## 5. Select an Evaluator

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A high-quality evaluation sponsored by a state workforce agency is dependent on a well-conceived preliminary evaluation plan and careful selection of the evaluator who will conduct the study. To obtain a high-quality evaluation, you need to select an evaluator with the expertise and capacity to conduct the type of evaluation you are pursuing. In general, a state agency uses three approaches to secure an evaluator:

- In-House Unit
- Partnership with a University or Other Organization
- Third-Party Firm or Organization Selected via an RFP Process

This section provides guidance on the qualities to look for in any potential evaluator, and processes and considerations for each of the three approaches.

### 5.1 What to Consider

A first step is to determine which of the three approaches to use—in-house, university/other partnership, third-party. Two key factors in choosing between an in-house unit, a partnership approach, or a third-party approach involve **in-house staffing levels** and **evaluator independence**. For many types of evaluation studies, states may have the in-house expertise to conduct the study, especially among the larger states. However, as noted by the NASWA report, many states are hampered by inadequate staffing levels in their workforce research shops and/or state pay level requirements that do not allow for employing highly experienced, senior level evaluators who would typically lead a major study (NASWA, February 2017).

In addition, the complexity of conducting impact studies (e.g., RCT, QE) means the qualifications, experience, and dedicated time commitment of a potential evaluator are critical to success in conducting the evaluation. Furthermore, impact studies generally demand evaluator independence to ensure that the study is conducted objectively and the results can be “trusted.” Consequently, and in general, it is advisable for states to use an independent third-party evaluator for impact studies.

The third key factor involves identifying the **level and type of experience and qualifications** you want the evaluator to have. The table in Exhibit 5.1 outlines some questions to ask yourself and examples of evidence to examine that may help you determine which qualities are most important, which can then, in turn, inform your decision about which of the three approaches to take. Potential evaluator in the context of this table means—in-house unit; or university/other partner; or third-party firm/organization. Note that in the case of a third-party evaluator, you will solicit bids and specifically seek a firm or organization with the qualifications you want. The table can also help you think through RFP specifications concerning experience and qualifications.

## Exhibit 5.1: Selection Questions and Evidence of Evaluator Experience

Topic	Questions	Examples of Evidence
<b>Evaluator Competencies and Experience</b>	<p>Does the potential evaluator demonstrate competency through experience in conducting the type of evaluation you want conducted? How much experience?</p> <p>Does the potential evaluator demonstrate knowledge of and experience with subject matter of your evaluation or a closely related topic (e.g., transitional job programs, employment services, youth job training programs)?</p>	<ul style="list-style-type: none"> <li>• Description of previous studies potential evaluator has conducted using proposed evaluation design or in proposed content field</li> <li>• Previous publications or other deliverables from these studies</li> <li>• Description of the mission, history, and experience of potential evaluator</li> <li>• Demonstrated record of use by previous clients</li> </ul>
<b>Staff Qualifications</b>	<p>Does the potential evaluator have a team that includes a mix of seniority levels-- senior-level, mid-level, and junior-level staff? (a mix helps with cost-effective conduct of an evaluation)</p> <p>Does the potential evaluator have the staff qualifications with related education and experience, for the Project Director (PD) and Principal Investigator (PI) (or team members in similar lead roles)?</p> <p>Does the potential evaluator have other staff qualifications/skills you want in order to conduct the evaluation as you envision it (e.g., proficiency in data collection and analysis, observational techniques)?</p>	<ul style="list-style-type: none"> <li>• Resumes or C.V.s</li> <li>• Publications written by senior staff demonstrating familiarity or skills in a particular evaluation type or context</li> </ul>
<b>Capacity and Resources</b>	<p>Does the potential evaluator have sufficient capacity to carry out the tasks that are likely associated with your type of evaluation? For example, an evaluation team conducting an RCT study in multiple sites would likely require more staff than an evaluation team conducting an outcomes study in a single site.</p> <p>Does the potential evaluator have demonstrated capacity and resources to: (1) collect data; (2) analyze data (e.g., statistical analysis programs); and (3) provide technical assistance on any evaluation-related issues?</p> <p>Does the potential evaluator have the administrative, IT, and publication support needed to aid in conducting the evaluation and producing deliverables?</p>	<ul style="list-style-type: none"> <li>• Description of potential evaluator team</li> <li>• Description of potential evaluator administrative and IT resources</li> <li>• Description of data collection and/or analysis tools created and/or used by the potential evaluator in previous studies</li> <li>• Sample products produced for previous clients</li> </ul>
<b>Specialized Knowledge</b>	<p>Does the potential evaluator have the specialized knowledge you are looking for? (e.g., familiar with relevant geographic, political, or other contextual elements)</p>	<p>Description of specialized knowledge on your topic of interest</p>

## 5.2 In-House Unit/Staff Approach

As state workforce administrators and evaluation managers, you will likely readily know if you have the in-house capability to conduct the planned study. That expertise may reside within your Labor Market Information (LMI) unit or elsewhere in the agency. If the evaluation involves using education data or may be of interest to your state department of education, especially the unit involved in career technical education, you may be able to establish an in-house evaluation team consisting of qualified evaluators drawn from both the workforce and education agencies. Key questions to consider include the following:

- Do you have staff with the requisite knowledge, skills, and experience in the kind of evaluation you want to conduct? Do you have someone who can lead the study and function as the project director and/or principal investigator? For example, you likely have qualified staff to conduct implementation and certain types of outcome studies, but maybe not to conduct an RCT or QE study.
- Does that staff have the calendar time and available work hours to conduct the study expeditiously in relationship to their other duties? Can they be allocated full time or nearly full time to the conduct of the study?
- Can you field an evaluation team that is relatively cohesive and can be committed to working on the study (in other words, splitting up pieces of an evaluation study among too many team members is generally not advisable)?
- Would it likely be more or less expensive to conduct the study in-house?
- To what extent is evaluator independence critical to state and stakeholder trust of the findings? Whether you have the qualified staff and in-house resources to do the study or not, perceptions of the quality and trustworthiness of study findings may dictate the use of a third-party evaluator.

## 5.3 Partnership Approach

As noted in the NASWA report on state capacity building, a number of states form partnerships with universities (and other research organizations) to expand their capacity to conduct program evaluations. There are some advantages to establishing formal partnerships with universities, such as:

- Supplement and augment your research and evaluation staff with highly qualified evaluators, especially regarding QE and RCT evaluation approaches and possibly at less cost than hiring a third-party private research firm.
- Minimize costs of conducting major evaluations by employing graduate students—they need real projects to work on and can usually get college credit for doing so.

- Host and otherwise support the use of “big data” by providing secure computing facilities (social science research universities/centers).
- Obtain IRB approvals for human subjects’ research since many major universities have established, HHS-registered IRBs.
- Minimize costs of conducting major evaluations by providing in-kind resources to support studies on common interests and of mutual benefit to the state (e.g., state universities).
- Bring other university, foundation, and research organization partners to the table—major social science research universities often have existing networks and partnerships of their own.
- State or local socio-demographic and socio-economic context research is often included in state level evaluations—and if you form an agreement with a university in your state, it is likely the institution has done a lot of work in this area already.

Partnerships, such as those mentioned above, are options to conduct a specific study (a one-time effort) or to form an ongoing relationship to make state administrative data available for external research. An ongoing relationship with a research entity at a university is much more involved and affords many more options for external evaluations, such is the case in Ohio, as documented in the NASWA report.

The key to forming partnerships is a mutually beneficial partnership agreement or Memorandum of Understanding (MOU) to document the partner roles and responsibilities, specific in-kind resources from the university, and in-kind state resources. Allocation or payment of “hard costs,” among other items also undoubtedly require a form of agreement. In this regard, it is different from hiring a third-party entity through an RFP process. Hiring means you control what they do for you; partnering means there is a mutual compact.

## 5.4 Third-Party Approach

A more typical approach to acquire the services of a third-party evaluator, states may also use a RFP bidding process. In general, as the sponsoring state agency, you will need to work with your procurement office to prepare the Statement/Scope of Work (e.g., tasks, timeline, deliverables), articulate bidder qualifications (corporate and staff), and provide a general budget estimate as the basis for development of the actual RFP. In addition, publicizing the RFP is critical to attracting as many qualified bidders as possible.

**Statement/Scope of Work:** Your preliminary plan and high-level time line and budget will help you in developing the Statement/Scope of Work for use by the procurement office. In general, the scope of work provides background information and context for the evaluation; purpose and scope of the evaluation; a list of the key research questions; details for specific tasks to perform; and a list of deliverables and deliverable timing requirements.

**Evaluator Qualifications:** Selection of an evaluator requires an understanding of evaluator competencies and experience, staffing qualifications, capacity and resources, and specialized knowledge. Examples of some of the questions to consider when making the selection are in the table in Exhibit 5.1. At a minimum, it is reasonable to require a qualified evaluator to have:

- (1) Experience implementing an evaluation of the proposed evaluation type or in the proposed content field;
- (2) Senior staff with post-graduate education and five plus (5+) years of experience that can demonstrate the technical skills necessary to implement the study;
- (3) Capacity and resources to negotiate agreements, facilitate stakeholder and partner meetings, data collection, data analysis, and report writing; and
- (4) Other specialized knowledge that may be critical to understanding the subject of the evaluation and/or the methodologies you want employed.

Overall, evaluator competencies and staff qualifications are often the important factors to ensure a quality evaluation. These criteria, as well specialized knowledge of the evaluation subject or topic are described in RFP selection criteria.

**Assessment of Bidder Proposals:** Ideally, you will receive several proposals in response to your RFP. Your state procurement office likely has a process in place to review and assess proposals to select the winner. Most often, the selection criteria is weighted for the technical proposal and staff qualifications. For example, while evaluator and staff experience are typical factors, you may also value content knowledge or experience in the geographic area in the evaluation. You can assign weight to each factor to help you find the evaluator that meets the needs for your study. To assess proposals, you may want to consider appropriate trade-offs between quality and cost competitiveness. While there will be some cost variation in potential bids, most bids are responsive to the key needs outlined in the RFP, and budgets should reflect the associated level of effort.

**Getting the Word Out—Publicizing the RFP:** Once approved, the RFP is posted in the public domain. Your state, no doubt, has a process for formally announcing the RFP and requesting responses similar to what the federal government does for its evaluations and other procurement actions. However, to ensure the broadest outreach to a wide range of potential evaluators, additional outreach may be useful to increase the number of responses. All additional “advertisements” should comply with your state procurement process. The following advertising avenues may be appropriate to consider, and when doing so, be sure to include information on where to find the official state announcement and copy of the RFP.

- Send letters or emails that announce the RFP to a likely group of evaluators
- Post a notice about the RFP on evaluation-focused websites
- Post a notice about the RFP on your agency’s website
- Announce the RFP on any social media sites associated with your agency, including but not limited to LinkedIn, Twitter, and Facebook
- Announce the RFP in local, state, or national evaluation newsletters or publications



## 6. Implement the Evaluation

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The key elements of preliminary planning described in Section 4 lead to implementation of the evaluation. Evaluation implementation activities are the responsibility of the selected evaluator, whether it is—in-house staff; third-party evaluator; university or other organizational partner—the state agency in charge of the evaluation. As such you will need to understand key implementation elements to oversee the process and to make overall determinations concerning the study’s timeline, resources needed (staff and funding), and other factors that could affect scope and quality. This section describes key evaluation implementation activities that state workforce administrators and evaluation managers need to be successful:

- Creating the evaluation design report to guide all aspects of the evaluation,
- Developing a data analysis plan for inclusion in the evaluation design report,
- Addressing the protection of participants’ rights (for certain types of studies),
- Linking or coordinating evaluation and program activities (for certain types of studies), and
- Reporting by the evaluator on interim and final study findings.

### 6.1 Creating the Evaluation Design Report

The first task of your selected evaluator will be to develop a plan for implementing the evaluation. Typically called an *Evaluation Design Report (EDR)*, this document serves as a guide for the evaluator and state agency to the unfolding of various evaluation activities. Depending on the type of evaluation you conduct, it also serves as a guide to program staff on how various evaluation activities link to or coordinate with program operations. The EDR builds upon your preliminary evaluation plan (see Section 3) and includes a data analysis plan developed by the selected evaluator. The selected evaluator expands and refines each element in state’s preliminary evaluation plan to create a detailed and feasible evaluation implementation plan. In addition to expanding upon the elements of your preliminary evaluation plan and depending on the type of evaluation you conduct, your evaluator may propose or otherwise suggest variations and additions concerning the following items:

- Appropriate and reliable outcomes that can be measured through available resources;
- Evaluation method(s), including data collection processes and sources;
- Data analysis plan/approach, including suitable controls for mitigating any threats or risks to successful interpretation of findings, and overcoming any limitations to the maximum extent possible;
- Timeline and milestones for evaluation activities; and
- Reporting details to convey evaluation progress, results, and findings.

The common EDR elements are included in table in Exhibit 6.1. Most of these elements are described or mentioned in Section 4: Develop an Evaluation Design Plan.



**Table 5-1: Elements Included in the Evaluation Design Report, As Appropriate**

Element	Summary Description
<b>Program Purpose, Scope &amp; Logic Model</b>	The purpose and scope of the program being evaluated are described. Each of the components is spelled out (if more than one). The logic model reflects the inputs, activities, outputs, and outcomes for the specific program. Expected outcomes from the program and possible effects of other activities on the variables of interest beyond those being evaluated are specified.
<b>Evidence Base (literature review)</b>	The evidence base is reviewed, synthesized, and summarized in the EDR. Relevant past interventions and evaluations are included, including findings and a discussion of research designs used, if applicable. The report describes how the evaluation will enhance the state's workforce system, the broader workforce system, and/or contribute to the workforce evaluation literature.
<b>Study Purpose &amp; Scope</b>	The purpose of the study is clearly articulated. This EDR section also describes which components of the program are being evaluated, and which are not (scope), and other scope parameters such as program sites or geographic areas to be included.
<b>Key &amp; Detailed Research Questions</b>	The evaluation design includes detailed research questions that are linked to the specific program being studied and aligned with its logic model and may include descriptive/process questions, general outcome questions, and/or impact questions (hypotheses about expected outcome changes due to the intervention), depending on the type of evaluation being conducted.
<b>Evaluation Type</b>	The type of evaluation being conducted and the justification for this approach is provided. The overarching evaluation methods are described, including how they are appropriate to the evaluation design and program being evaluated.
<b>Participants, Samples, and Units of Analysis</b>	For implementation studies, the report would describe the program sites and/or geographic areas selected for study. For outcome and impact studies, the report describes: the unit of analysis; the eligibility or exclusion criteria for program participants (i.e., the target population, if applicable); the overall population targeted or from which generalizations will be made; whether the evaluation will be conducted on the entire population vs. a sample; and if a sample, whether it is representative.
<b>Data Collection Plan</b>	Depending on the type of evaluation being conducted, this section defines the primary process and/or participant outcomes, proposed outcome measures that are valid, appropriate, and reliable, and what qualitative information will be collected. Data sources are described for each measure and for each process or qualitative line of inquiry, along with each data collection method, including whether data are from new sources (primary data collection) or existing administrative sources (secondary data collection such as from an MIS), and details whether sources are unique to the program and evaluation. Specific methods and schedule for collecting the data from each source are delineated. The plan may also include draft data collection protocols/instruments or a description of what will be developed.
<b>Data Analysis Plan</b> (see Section 6.2)	This section of the report will depend on what type of study is conducted. For example, for impact studies, if there is a sampling plan, the EDR describes the purpose and method of sampling and provides anticipated sample sizes. For RCT impact designs, power calculations are included, and the process for random assignment of participants to treatment and control groups is described, and any impact formulas and other analytical assumptions. This section also describes the analytical software or other tools that are appropriate to the evaluation design. The design report needs to discuss validity/threats—any issues of internal and external validity, threats to validity and their implications, and strategies to mitigate selection bias, if needed.
<b>Supplemental Studies</b>	For example, if an outcome or impact study is conducted that includes an implementation and/or cost study, the EDR needs to cover plans for doing so, including research questions, data sources and collection, and analysis methods.
<b>Reporting</b>	Plans for reporting results are documented, including the provision of evaluation data sets and a de-identified data set at the conclusion of the study (if appropriate).

## 6.2 Developing the Data Analysis Plan

The selected evaluator is responsible for developing data analysis plan based on the preliminary plan you provide. The evaluator will use your preliminary plan as the foundation, suggest expansion or modifications thereto, and connect the dots via the data analysis plan—how to get from the high-level purpose, scope, key research questions, and research design to the analysis and determination of findings. A data analysis plan outlines the key steps and processes used to analyze the data collected prior to actually collecting it. The data analysis plan a roadmap that connects the research questions to the data, and describes how the data is analyzed, separates the key research questions into “testable” hypotheses and aligns each with the data and analytical methods used. A data analysis plan identifies the metrics for outcomes measured—both, process outcomes describe the program implementation activities and outcome measures define the intended results, along with the variables examined. The table in Exhibit 4.2 provides a list of items to be covered using an RCT study example. Depending on the type of study you conduct, some of these items would not apply. A data analysis plan is an integral part of the EDR; hence the overlap between tables.

**Table 6.2: Items to Cover in a Data Analysis Plan (RCT Example)**

Items	Brief Description of What to Include
Translation of Research Questions	<ul style="list-style-type: none"> <li>• Translate questions and possibly logic model elements into testable hypotheses</li> <li>• Specify key outcomes and specific associated measures, steps along the causal chain to be measured, and whether any subgroup analyses will be done</li> <li>• Describe validity, reliability, and use history of each measure to be used</li> </ul>
Data Sources	<ul style="list-style-type: none"> <li>• Describe exactly which sources will be used such as program records, administrative data, or specific data collection instruments designed for the study</li> <li>• Link each outcome to be measured to how it will be measured (method to be used such as a survey, test, or interview, or drawn from an existing data set)</li> <li>• Include data collection protocols and instruments (e.g., surveys, interview guides)</li> </ul>
Study Population, Sample & Sampling Plan	<ul style="list-style-type: none"> <li>• Describe the overall study population and sub-groups to be studied</li> <li>• Describe purpose and method of sampling, including how the sample will be drawn to be representative of the study population, and anticipated sample sizes</li> <li>• Describe random assignment procedures for both treatment and control groups</li> <li>• Include power calculations, any impact formulas, and other analytical assumptions</li> </ul>
Planned Analyses & Analytical or Statistical Methods	<ul style="list-style-type: none"> <li>• Discuss statistical analysis methods to be used, how hypotheses will be tested, and how potential confounding and bias will be assessed and addressed</li> <li>• Specify how variables will be constructed (e.g., where levels used, handling of missing variables, procedures for dealing with outliers)</li> <li>• Specify how the treatment effect equation will be estimated (e.g., difference-in-differences), regression controls to be included, calculation of standard errors</li> <li>• Specify methods for dealing with multiple outcomes, survey attrition (if a survey is done), and outcomes with limited variation</li> </ul>
Tracking Study Participants	<ul style="list-style-type: none"> <li>• Describe how the study will track participants and their data, including mechanisms for monitoring, tracking, and troubleshooting issues; and data security procedures</li> <li>• Specify how missing data will be handled (e.g., attrition rate calculations)</li> </ul>
Validity/Threats	<ul style="list-style-type: none"> <li>• Discuss issues of internal and external validity, threats to validity, and implications</li> <li>• Describe strategies to mitigate selection bias, if needed</li> </ul>
Analysis Tools	Describe the analytical software or other tools appropriate to the study

## 6.3 Protecting Participant Rights

A key evaluation implementation activity involves protecting the rights of the individuals who participate in the study. This aspect generally pertains to impact (RCTs) and pre-post outcome studies. In these types of studies, you will be collecting and storing detailed information about individuals who agree to participate. For studies involving individual-level data, the information study participants provide will allow you to measure the effectiveness of your program. As such, the study participants, or human subjects, are the heart of your evaluation.

Although part of the evaluation implementation conducted by your selected evaluator, your preliminary plan will need to factor in whether the evaluation will require adhering to federal rules concerning the protection of participant rights via the Institutional Review Board (IRB) application and review process. It is important to note that human subject considerations have very practical implications for your evaluation timeline and budget, and they may also affect other major and minor features of your study, such as the following:

- Evaluator you choose to conduct the study (e.g., experience with the IRB review process and data security capacity)
- How you and your evaluator will structure data collection (data types and methods)
- How much time to allow for IRB application and review
- Additional resources needed to conduct informed consent
- Technology (encryption software, secure file transfer protocol [FTP]) needed to securely transfer and store participant information

**IRB Process Overview:** To ensure appropriate protections are in place and maintained, IRBs serve as an independent and objective ethics committee to ensure the protection of human subjects. An IRB's job is to approve (or disapprove) human subjects research—or require modifications prior to approval. IRB review should occur prospectively—that is,



### Key Terms & Definitions

**A human subject:** anyone about whom an investigator conducting research gains (1) data by way of intervention or interaction with the individual or (2) identifiable private information (Code of Federal Regulations 45 CFR 46.102(f)).

**Private information:** includes information that an individual can reasonably expect will not be made public & information about behavior that an individual can reasonably expect will not be observed or recorded.

**Identifiable:** means that the identity of the individual is or may readily be ascertained by the investigator or associated with the information.

**Personally Identifiable Information (PII):** information that would allow someone to identify, contact, or locate another person or to identify an individual in context; PII includes names, social security numbers, dates of birth, addresses, and other contact information & includes any piece of personal information that can be used alone or in combination with another source to uniquely identify a single individual.

before study procedures are implemented. IRBs are also responsible for continual review by monitoring active research projects, reviewing and addressing any unanticipated problems, and reporting serious adverse events to regulators. IRBs have the authority to suspend or terminate research that does not comply with the rules to protect research participants from harm. The main roles and responsibilities of IRBs are summarized in the table in Exhibit 6.3. IRBs are registered and regulated by the Department of Health and Human Services (HHS). In general, IRBs are at medical centers and universities, although some research firms also host their own IRBs.

Your selected evaluator will likely have experience with and knowledge about which IRB to use and how to contact the IRB, and the overall process involved to receive approval for the study (if required) before engaging human subjects. The IRB will let the evaluator know whether the study is “exempt” from review or is “non-exempt” and needs to undergo a formal review by the board.

The decision to include a protocol for IRB review—and the level of review, either expedited or full board—depends on a variety of the following factors, the:


- Level of risk to participants overall and relative to the potential social benefit of the research,
- Vulnerability of the population under study, and
- Steps the evaluator takes to minimize risks and safeguard participants.

Generally, studies that may pose minimal or greater than minimal risk to participants needs review by the IRB. Evaluation requirements that constitute exempt research, minimal risk, or greater than minimal risk is decided by an IRB, not the evaluator.

The process could take anywhere from one to several months. The time it takes to prepare an application for IRB review, have it reviewed, respond to comments or requests for revisions, and receive approval depends on both the complexity of the research project and the level of risk it poses to participants.

Four major areas for consideration during the IRB review process include:

- The study’s procedures for informed consent;
- How the evaluator will protect privacy and confidentiality;
- The plan for data security; and
- How the evaluator will handle adverse events and unanticipated problems.



**Key Evaluator Actions**

- Consult with an IRB about study plans
- Allocate time & resources to prepare a study protocol for IRB review
- Be prepared to respond to IRB requests & comments on research plans


These factors have very real, on-the-ground implications for how the study will unfold. As the state agency sponsor for the study, you will want to be aware of and may be involved in executing these aspects of the study protocol.

### Exhibit 6.3: IRB Responsibilities and Study Approval Criteria

Responsibilities of IRBs	Criteria Needed to Obtain IRB Approval
<ul style="list-style-type: none"> <li>• Prospectively review and approve study procedures</li> <li>• Review “unanticipated problems” and adverse events</li> <li>• Observe and monitor studies (e.g., observe consent process, audit consent forms)</li> <li>• Suspend or terminate studies if needed to protect the safety of participants</li> <li>• Report serious adverse events to the appropriate regulators</li> <li>• Train researchers, evaluators, and other key team members on ethical standards to protect participants</li> </ul>	<ul style="list-style-type: none"> <li>• Minimize risks to participants</li> <li>• Benefits to society and/or participants outweigh the risks</li> <li>• Select participants equitably to distribute burden</li> <li>• Obtain and document informed consent process</li> <li>• Monitor welfare of participants for safety and complaints</li> <li>• Minimize risks to privacy and confidentiality</li> <li>• Additional safeguards to protect rights and welfare of vulnerable populations (e.g., children, pregnant women, “persons who are economically or educationally disadvantaged”)</li> </ul>

**Informed Consent:** To collect information from and about individuals participating in a research study, the evaluator needs to obtain their legally effective informed consent (or that of a parent or guardian if the participant is a minor (under 18). Obtaining informed consent includes giving prospective study participants sufficient opportunity to consider participation and minimizing “undue influence” and “coercion.” Informed consent is a *process* (not just a form) that begins with explaining the study. The information provided to prospective participants during the consent process must help them understand the implications of participation.

It is essential to disclose all relevant information honestly and to give each individual the opportunity to ask questions and receive answers to their questions.



### Key Informed Consent Terms

**Undue Influence:** offering excessive or inappropriate reward for participation or causing someone to feel obligated to participate

**Coercion:** an overt or implicit threat of harm such as telling a parent/guardian or young person that he/she will lose access to service if one does not participate

**Privacy and Confidentiality:** Once participants consent to the study, the study team is required to protect their privacy and the confidentiality of their information to prevent its accidental disclosure or loss. Protecting **privacy** means collecting data in such a way that participants’ information or personally identifiable information (PII) is not seen or overheard by others. For example, they take surveys in a private space where others cannot view their answers. Protecting **confidentiality** of participant information means:

- (1) Not sharing information about participants except with those authorized to have it; and
- (2) Complying with a study-wide plan for secure collection, transfer, storage, and use of participant information.



**Data Security:** With regard to **data security**, the state sponsoring agency and the evaluator chosen to conduct the study have a collective responsibility to protect participant information. All parties will need to work together to create a climate of accountability and responsibility when it comes to data. Part of this includes establishing a plan for data security. A data security plan describes the requirements to protect PII and identifies potential penalties for losing data and for failing to destroy data once, when no longer needed. It lays out steps to inform individuals or entities that their information was lost, stolen, or otherwise compromised. Robust data security can help safeguard against the accidental loss or disclosure of participants' information. You and your evaluator will need to work out the specifics as they apply to your evaluation.

**Adverse Events and Unanticipated Problems:** In research as in life, things do not always go as anticipated. For this reason, the evaluator should have a plan for handling adverse events and unanticipated problems. Examples of unanticipated problems concerning the protection of participant rights include the following:

- A participant is visibly upset by the questions during the survey.
- You learn that a participant is at risk of harm.
- A participant or his/her parent/guardian has serious concerns about the study.
- Study procedures were not followed (i.e., participant consent, data security).
- Study data are lost (e.g., consent forms, paper and pencil surveys).

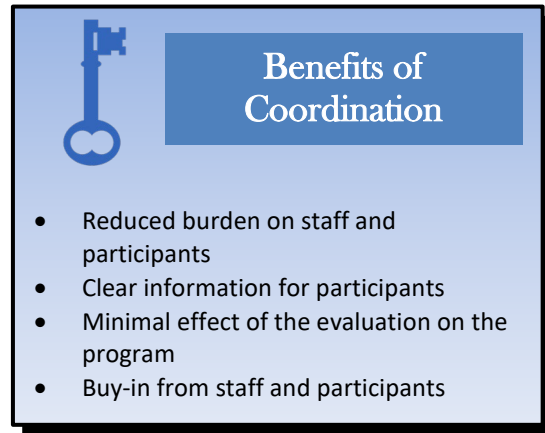
As the state sponsoring agency, you will want to be sure that your selected evaluator is prepared for such potential problems and may want to have specific procedures in place for you, the evaluator, and the program operator to work together to resolve such issues should they arise.

## 6.4 Coordinating Evaluation and Program Activities

This section is only relevant when you are evaluating a specific program, service, or intervention that requires field research and direct interaction with the program implementation staff and participants (e.g., grantees). Such an evaluation means that clear procedures are identified to establish regular connections during each phase of the study. The guidance provided herein primarily pertains to interactions between the evaluator you choose to conduct the study and the program implementation staff. However, the state entity sponsoring the study has a responsibility to help set the stage for the interactions with the program being evaluated.

It is the responsibility of both the state sponsoring entity and the evaluator to ensure that the evaluator has sufficient access to project activities and staff to obtain information and conduct evaluation activities, while still maintaining sufficient independence to be objective. In practice, this means that coordination and communication with the evaluator can be operationalized through regular project management activities and communication mechanisms, such as conference calls or meetings, and ensuring the evaluator is informed of program design decisions or changes.

Training program staff to understand the significance of the evaluation and to provide information as required by the evaluator supports the timely completion of a study. Program personnel who regularly communicate with program participants must be able to articulate the requirements of the evaluation (for example, they should be able to explain the random assignment process if an RCT design is used). Training provided by the evaluator informs program staff about the evaluation and ensures that program staff understand and work with the evaluation processes and requirements.



There are typically several key time points during the evaluation when the evaluator will need access to program staff to obtain information about activities. These time points include when:

- **Baseline data collection** takes place;
- **Implementation of random assignment design** occurs if conducting an RCT; and
- **Additional data collection** (such as follow-up surveys) is conducted.

At each of these points, the evaluator and program staff need to work closely together to find the best way to integrate the study activities into program activities. Close and sensible integration of evaluation activities into program activities has many benefits, and includes:

- Reduction of burden on staff,
- Informed program applicants and study participants,
- Minimal effect of the evaluation on the program (ideally, no effect on the program), and
- Buy-in to the evaluation among both staff and study participants.

**Baseline Data Collection:** Often conducted at the time of program enrollment, this data collection activity may require program staff to collect additional information from participants. Staff involved in conducting this data collection need training by the evaluator. The evaluator and program staff should discuss when baseline data is collected and how this data collection is integrated into the typical enrollment processes to reduce burden on both staff and study participants. For example, if the program already collects some data on participants at enrollment, it may be appropriate to consider combining the evaluation data collection and standard program data collection into one document (one data collection form), or administer both forms simultaneously to ensure that the program and the evaluator receive all need information.



### Random Assignment Process for RCT

**Evaluations:** Assignment of individuals to the treatment condition or the control condition (those who will receive status quo services) is conducted at the time of enrollment. The evaluator generally trains program personnel involved in this process. The program staff and the evaluator jointly decide upon the point of “randomization” within the program enrollment or intake flow. To the extent feasible, it may be useful to integrate the random assignment and other processes required for an RCT evaluation into the standard intake procedures. Such integration lessens the burden on program staff and provides for the informed consent requirements with applicants during the program enrollment process.



#### Typical Points for Integration

- Baseline data collection
- Random assignment process (for RCTs)
- Interim data collection
- Post-program exit data collection

For example, the random assignment step added to the enrollment as they begin the process facilitates informed consent. When participants come to an information session, they complete eligibility screening forms. Once the selection process is completed, those individuals deemed eligible will progress forward and participate in an interview, at which time their consent is obtained and the baseline data collection forms are completed. Then, a staff member uses this information to conduct random assignment using a system designed by the evaluator. While there are many ways to integrate random assignment into the enrollment process, the key is to do it as smoothly as possible to not lose applicants' interest, not burden program staff, and maintain continuity through the randomization period. Usually, evaluators develop an RCT procedures manual to document how the randomization process is handled.

**Other Data Collection Activities (Interim; Post-Program Exit):** The evaluator determines an appropriate timeframe for data collection and coordinates timing with the program staff well in advance of when collection will occur. If data collection involves surveying participants during the program or after program exit, program staff remind study participants about data collection activities when they are on the horizon. The evaluator may ask program staff to endorse any data collection effort whenever they make contact with participants, or may ask to send a letter on behalf of the program. While program staff should not assume a large amount of burden for the evaluation data collection, it benefits both the program and the evaluation if program personnel do what they can to encourage participants to respond.

## 6.5 Evaluation Report Requirements

Reports regarding a project are deliverables that your evaluator will produce; these documents are important because they represent the culmination of all evaluation activities. They convey the evaluation's findings to relevant stakeholders, including you as the sponsoring state agency, your state stakeholders, DOL, the larger workforce community, and other potential funders. Not all reports come at the end of the evaluation,

however. Some evaluations include a component that provides feedback at the beginning of a program to shape program design and/or implementation. Interim reports typically describe program activities; assess fidelity to the model, and share activities and findings at given points of study period. Final reports serve as the official record of the evaluation and present all findings appropriate to the type of study conducted. Progress reports document evaluation activities along the way. It is up to you, as the state agency sponsoring the evaluation, to determine what types of reports you want produced by your evaluator. Below for your convenience is a description of different report types, followed by guidance on how to communicate reporting expectations to your evaluator.

**Interim Reports:** These reports convey findings about the program evaluation as it is implemented. Interim reports will allow all those involved to learn more about short- and medium-term participant or other outcomes during implementation. For multi-year evaluations, interim reports are submitted at the evaluation's mid-point. At a minimum, evaluators submit annual or semi-annual reports that include a description of program implementation, participant characteristics, and short-term outcomes.

**Progress Reports:** These reports are written reports provided on a regular basis (e.g., monthly, quarterly, yearly) that provide updates on evaluation activities during the given time period. These reports can help you: (1) determine if an evaluator is on track to complete the evaluation within the allotted time and resources; (2) understand what activities are being undertaken; and (3) maintain open communication throughout the course of the evaluation.

**Final Reports:** This report serves as the capstone to the study. Final reports are published on your state website, DOL's website, and/or elsewhere, depending on study sponsors and funders. Final reports are helpful to all those involved and ultimately state policymakers and the larger workforce community. Key topics typically covered by the final report, and to a lesser extent by the interim report, include the following:

- Program being evaluated or other subject of the evaluation;
- Economic, geographic, and/or political context that may have contributed to program implementation or evaluation results;
- Information on the research questions and evaluation methodologies used
- Information on the sources of both quantitative and qualitative data;
- Program operations as planned and implemented (process/operational aspects)
- Analysis of quantitative and qualitative data;
- Interpretation of results and presentation of findings (objective presentation);
- Identification of lessons learned, or promising and best practices; and
- If appropriate to the type of study conducted, how other programs may use information in the report to replicate or scale-up programs like the one being studied

Depending on the type of study conducted, the evaluator prepares and submits the public use data set as part of final reporting deliverables.

**Communicating Your Reporting Requirements to the Evaluator:** As the state agency sponsoring the evaluation, you will select an evaluator to conduct the study—an in-house unit/staff; a third-party evaluator via an RFP; or a university or other organization to jointly conduct the study. In all cases, you will need to clearly communicate your reporting expectations in an RFP, in a joint agreement, or in guidance to in-house staff (see Section 6 for evaluator selection guidance). To ensure that everyone is clear, and in particular to ensure you receive appropriately budgeted proposals from prospective third-party evaluators via an RFP, you should explicitly state how many reports the state sponsoring agency expects and when you expect them. Note that increasing reporting requirements increases evaluation costs, no matter who conducts the evaluation. You should carefully balance the value of the information desired with cost considerations. Key things to communicate in writing include the following:

- What type of reports, how often, and approximate due dates/timeframes
- For progress reports, how often and what they need to cover with regard to evaluation activity reporting (e.g., monthly, quarterly)
- For interim and final reports, how many interim reports and what they should cover, when both interim and finals should be delivered for review as drafts, and when the final versions are due after incorporating comments (progress reports are typically not done in draft and final forms)

When specifying due dates for reports, keep in mind the following, depending on the type of evaluation being conducted and research design (methods) and data collection approach being used.

- **Final Reports.** These may need to allow for the follow-up period to track participant outcomes. For example, if evaluators will be tracking participant outcomes 12 months after program enrollment, you will want to ensure that the final report is not due until after the 12-month period is over for the last participants enrolled. Evaluators will need time for analysis, writing, and revisions. This process can take anywhere from two to five months, depending on the sample size, complexity of analysis, and number of revisions.
- **Interim Reports.** These may need to take into account when it might be reasonable to expect some results or when processes may need to be documented. For example, if your program requires six months of training and your main interest is in participant outcomes, it probably does not make sense to request an interim report before the first group of enrollees has completed the training.

# Conclusion

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This toolkit contains references and links to many resources, most of which are available in the public domain. As your agency works to broaden its research and evaluation capacity, consider the information in this guide as part of the principles, steps and standards to build upon an evaluation framework. Each of the sections presents options to help you frame the following questions:

- What is the best way to evaluate workforce system programs, services or strategies?
- What are we learning when we evaluate?
- How can we use the learning from these efforts to improve our programs and services?

Using this toolkit may help you think about effective program evaluation as a systematic way to improve services, inform customers and stakeholders, and create a foundation for evidence-based practices.

# Appendices

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- A. Performance, Research and Evaluation Framework
- B. WIOA Evaluation Regulations
- C. Evaluation Resources and References
  - 14) National and Federal Policy, Planning and Guidance Resources
  - 15) Evaluation Resources and Online Toolkits
  - 16) Behavioral Insight Studies
  - 17) Cost Studies
  - 18) Data Analytics
  - 19) Implementation Studies
  - 20) Interrupted Time Series
  - 21) Logic Models
  - 22) Outcome Studies
  - 23) Power Analysis
  - 24) Quasi-Experimental Studies
  - 25) Randomized Controlled Trial (RCT) Studies
  - 26) Theory of Change
- D. Example of the Learning Agenda Process
- E. Logic Model Template
- F. Glossary of Terms

## Appendix A: Performance, Research and Evaluation Framework

Performance	Monitoring	Research	Evaluation
<b>The What</b>			
Performance management processes or systems that use goals, measurement, analysis, and data-driven reviews to improve program results and the effectiveness and efficiency of agency operations. Performance information promotes data-driven decision-making. Program performance data tracked also feeds into evaluations.	Systematic, routine and ongoing collection and review of project or program implementation in relationship to the stated plan or requirements (e.g., are participants receiving services consistent with program intent; is the program in compliance with the “rules”). Monitoring results of monitoring maybe used for program management or evaluations.	Empirical process that uses workforce data to develop descriptions, measurements, comparisons, and tests of hypothesized relationships. Results usually fed into and used by evaluations.	Empirical analysis that uses program and other data to describe the operation of a program, measure the program impacts on outcomes of policy and program interest, and/or determine cost effectiveness of the program to identify improvements, best practices, and/or what works and does not work.
<b>The How</b>			
<p>Key components:</p> <ul style="list-style-type: none"> <li>• Goals and priorities—strategic, cross-agency, performance</li> <li>• Strategic plans—mission, goals, strategies/programs, measurement</li> <li>• Performance measures—data that gauge how a program or organization is performing to inform strategic planning, accountability, decision making, improvements</li> <li>• Progress reviews—data driven reviews of goal progress and strategy/program performance</li> <li>• Reporting—performance transparency and accountability</li> </ul>	<p>Types of monitoring examples:</p> <ul style="list-style-type: none"> <li>• Results monitoring</li> <li>• Process/activity monitoring</li> <li>• Compliance monitoring</li> <li>• Participant monitoring</li> <li>• Financial monitoring</li> <li>• Organizational monitoring</li> </ul>	<p>Types of research examples:</p> <ul style="list-style-type: none"> <li>• Descriptive statistics</li> <li>• Descriptive analyses</li> <li>• LMI research</li> <li>• Research to support policy development</li> <li>• Data analytics</li> </ul>	<p>Types of evaluation examples:</p> <ul style="list-style-type: none"> <li>• Implementation studies</li> <li>• Outcome studies</li> <li>• Impact studies (including behavioral insight studies)</li> <li>• Cost studies</li> </ul> <p>(Section 2 provides more details).</p>
Adapted from Multiple Sources: NASWA, February 2017; Performance Improvement Council, no date; Council for International Development, June 2014; National Academy for State Health Policy, August 2015.			

## APPENDIX B: WIOA EVALUATION REGULATIONS

### § 682.220 What are States' responsibilities in regard to evaluations?

(a) As required by § 682.200(d), States must use funds reserved by the Governor for statewide activities to conduct evaluations of activities under the WIOA title I core programs in order to promote continuous improvement, research and test innovative services and strategies, and achieve high levels of performance and outcomes.

(b) Evaluations conducted under paragraph (a) of this section must:

- (1) Be coordinated with and designed in conjunction with State and Local WDBs and with State agencies responsible for the administration of all core programs;
- (2) When appropriate, include analysis of customer feedback and outcome and process measures in the statewide workforce development system;
- (3) Use designs that employ the most rigorous analytical and statistical methods that are reasonably feasible, such as the use of control groups; and
- (4) To the extent feasible, be coordinated with the evaluations provided for by the Secretary of Labor and the Secretary of Education under WIOA sec. 169 (regarding title I programs and other employment-related programs), WIOA sec. 242(c)(2)(D) (regarding adult education), sec. 12(a)(5), 14, and 107 of the Rehabilitation Act of 1973 (29 U.S.C. 709(a)(5), 711, 727) (applied with respect to programs carried out under title I of that Act (29 U.S.C. 720 et seq.)), and the investigations provided by the Secretary of Labor under sec. 10(b) of the Wagner-Peyser Act (29 U.S.C. 49i(b)).

(c) States must annually prepare, submit to the State WDB and Local WDBs in the State, and make available to the public (including by electronic means) reports containing the results, as available, of the evaluations described in paragraph (a) of this section.

(d) States must cooperate, to the extent practicable, in evaluations and related research projects conducted by the Secretaries of Labor and Education under the laws cited in paragraph (b)(4) of this section. Such cooperation must, at a minimum, meet the following requirements:

(1) The timely provision of:

- (i) Data, in accordance with appropriate privacy protections established by the Secretary of Labor;
- (ii) Responses to surveys;
- (iii) Site visits; and
- (iv) Data and survey responses from local subgrantees and State and Local WDBs, and assuring that subgrantees and WDBs allow timely site visits;

(2) Encouraging other one-stop partners at local level to cooperate in timely provision of data, survey responses and site visits as listed in paragraphs (d)(1)(i) through (iv) of this section; and



- (3) If a State determines that timely cooperation in data provision as described in paragraph (d)(1) of this section is not practicable, the Governor must inform the Secretary in writing and explain the reasons why it is not practicable. In such circumstances, the State must cooperate with the Department in developing a plan or strategy to mitigate or overcome the problems preventing timely provision of data, survey responses, and site visits.

(e) In fulfilling the requirements under paragraphs (a) through (c) of this section, States are permitted, but not required, to:

- (1) Conduct evaluations that jointly examine title I core program activities and activities under other core programs in WIOA titles II–IV, as determined through the processes associated with paragraph (b)(1) of this section;
- (2) Conduct any type of evaluation similar to those authorized for, or conducted by, the Department of Labor or the Department of Education under the laws cited in paragraph (b)(4) of this section, including process and outcome studies, pilot and demonstration projects that have an evaluative component, analyses of administrative and programmatic data, impact and benefit-cost analyses, and use of rigorous designs to test the efficacy of various interventions; and
- (3) Conduct evaluations over multiple program years, involving multiple phases and such tasks and activities as necessary for an evaluation, such as a literature or evidence review, feasibility study, planning, research, coordination, design, data collection, analysis, and report preparation, clearance, and dissemination.

(f) In funding evaluations conducted under paragraph (a) of this section, States are permitted, but not required to:

- (1) Use funds from any WIOA title I–IV core program to conduct evaluations, as determined through the processes associated with paragraph (b)(1) of this section; and
- (2) Use or combine funds, consistent with Federal and State law, regulation and guidance, from other public or private sources, to conduct evaluations relating to activities under the WIOA title I–IV core programs. Such projects may include those funded by the Department of Labor and other Federal agencies, among other sources.

## APPENDIX C: Evaluation Resources and References

The following items provide references to documents cited in the toolkit and additional resources for more in-depth understanding of evaluation concepts and analysis methods. Hyperlinks are provided, where available; and the resources are organized by broad-base categories. Other than documents specifically produced and used by and for the Department of Labor, it is important to note that DOL does not endorse other cited publications, resources and materials or their authors.

### 1. National and Federal Policy, Planning and Guidance Resources

#### Laws, Regulations, Guidance

*Workforce Innovation and Opportunity Act (WIOA) of 2014, PL 113-128:*

For a copy of the law, see <https://www.congress.gov/113/bills/hr803/BILLS-113hr803enr.pdf>

For the final regulations, see [https://www.doleta.gov/wioa/Final\\_Rules\\_Resources.cfm](https://www.doleta.gov/wioa/Final_Rules_Resources.cfm)

*President's Executive Order on Expanding Apprenticeships in America, June 15, 2017.* Available at: <https://www.whitehouse.gov/presidential-actions/3245/>

*U.S. DOL, Draft DOL Strategic Plan for 2018-2022.* Available at:

<https://www.dol.gov/agencies/osec/Draft-FY2018-2022-Strategic-Plan>

*Office of Management and Budget (OMB). OMB M-17-28 on Fiscal Year 2019 Budget Guidance, July 7, 2017.* Available at:

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*ETA Training and Employment Guidance Letter (TEGL) No. 14-15, March 4, 2016 on Workforce Innovation and Opportunity Act (WIOA) Requirements for Unified and Combined State Plans; and TEGL No. 06-17, January 24, 2018 on Modification Requirements for WIOA Unified and State Combined Plans.* Available at:

[https://wdr.doleta.gov/directives/attach/TEGL/tegl\\_14-15.pdf](https://wdr.doleta.gov/directives/attach/TEGL/tegl_14-15.pdf)

[https://wdr.doleta.gov/directives/attach/TEGL/TEGL\\_6-17.pdf](https://wdr.doleta.gov/directives/attach/TEGL/TEGL_6-17.pdf)

*Office of Management and Budget, Required Elements for Submission of the Unified or Combined State Plan and Plan Modifications under the Workforce Innovation and Opportunity Act, February 18, 2016. OMB Control No. 1205-0522.* Available at:

[https://www.doleta.gov/WIOA/docs/WIOA\\_State\\_Plan\\_ICR\\_OMB\\_Passback\\_Plus\\_Supplement.pdf](https://www.doleta.gov/WIOA/docs/WIOA_State_Plan_ICR_OMB_Passback_Plus_Supplement.pdf)

Commission on Evidence-Based Policymaking. (September 2017). "The Promise of Evidence-Based Policymaking." Bi-partisan US Congressional Commission on Evidence-Based Policymaking, Washington, DC. Available at: <https://www.cep.gov/cep-final-report.html>

Bipartisan Policy Center. (May 2017). "Congress and Evidence-Based Policymaking: Creating a 21<sup>st</sup> Century Legislature." Bipartisan Policy Center, Washington, DC. Available at:

<https://bipartisanpolicy.org/library/congress-and-evidence-based-policymaking/>

## Employment and Training Research, Assessments, Training and Guides

Mathematica Policy Research, MPR. (March 2017). "Employment Research in Brief: An Annotated Bibliography of ETA-and CEO-Sponsored Studies 2012-2016." MPR for U.S. Department of Labor, Employment and Training Administration, Washington, DC. This document along with previous year bibliographies and other related documents are available at <https://www.doleta.gov/research/>

National Association of State Workforce Agencies, NASWA (February 2017). "Evidence-Building Capacity in State Workforce Agencies: Insights from a National Scan and Two State Site Visits." NASWA for US Department of Labor, Employment and Training Administration, Washington, DC. Available at: [https://wdr.doleta.gov/research/FullText\\_Documents/ETAOP-2017-13\\_Evidence\\_Building\\_Capacity\\_in\\_State\\_Workforce\\_Agencies\\_Report.pdf](https://wdr.doleta.gov/research/FullText_Documents/ETAOP-2017-13_Evidence_Building_Capacity_in_State_Workforce_Agencies_Report.pdf)

Employment and Training Administration. (February 2015 & December 2016). "Listening Session on States' Role in Evaluation and Research under WIOA, February 24, 2015, and Listening Session on Evaluation and Research: Building Capacity under WIOA." December 7, 2016." U.S. Department of Labor, Washington, DC. Available at: <https://www.workforcegps.org/events/2016/11/17/12/14/WIOA-Wednesday-Research-Evaluation-and-More>  
[https://www.workforcegps.org/events/2015/01/29/15/11/Listening\\_Session\\_ST\\_RoleWIOA](https://www.workforcegps.org/events/2015/01/29/15/11/Listening_Session_ST_RoleWIOA)

Pew-MacArthur Results First Initiative. (November 2014). "Evidence-Based Policymaking: A Guide for Effective Government." The Pew Charitable Trusts, Washington, DC and the MacArthur Foundation, Chicago, IL. Available at: <http://www.pewtrusts.org/en/projects/pew-macarthur-results-first-initiative>

Pew-MacArthur Results First Initiative. (January 2017). "How States Engage in Evidence-Based Policymaking: A National Assessment." The Pew Charitable Trusts, Washington, DC and the MacArthur Foundation, Chicago, IL. Available at: <http://www.pewtrusts.org/en/projects/pew-macarthur-results-first-initiative>

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## **2. Evaluation Resources and Online Toolkits**

### Guides, Handbooks and Related References

Corporation for National and Community Service, Social Innovation Fund. (October 2016). "Evaluation Reporting Guidance: Feasibility, Implementation and Impact Study Reports." Corporation for National and Community Service, Washington, DC. Available at: [https://www.nationalservice.gov/sites/default/files/resource/GP\\_SIF\\_Evaluation\\_Reporting\\_Guidance\\_0.pdf](https://www.nationalservice.gov/sites/default/files/resource/GP_SIF_Evaluation_Reporting_Guidance_0.pdf)

National Academy for State Health Policy. (August 2015). "Determining the Impact of State

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Council for International Development. (June 2014). “Monitoring Versus Evaluation, Fact Sheet 17, June 2014.” Council for International Development, New Zealand. Available at:  
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<http://coalition4evidence.org/>

What Works Clearinghouse, *Procedures and Standards Handbook (Version 2.1)*. Available at:  
[http://ies.ed.gov/ncee/wwc/pdf/reference\\_resources/wwc\\_procedures\\_v2\\_1\\_standards\\_handbook.pdf](http://ies.ed.gov/ncee/wwc/pdf/reference_resources/wwc_procedures_v2_1_standards_handbook.pdf)

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J.S. Wholey, H.P. Hatry, and K.E. Newcomer, eds. (2010). *Handbook of Practical Program Evaluation*. Jossey-Bass, San Francisco, CA.

P. Rossi, M. Lipsey, and H. Freeman (2003). *Evaluation: A Systematic Approach*. 7th Edition. Sage Publications, Thousand Oaks, CA.

### [Online Toolkits and Searchable Research and Evaluation Publication Resources and Collections](#)

Community Toolbox. *Chapter 36: Introduction to Evaluation*. The Toolbox is a public service provided by the University of Kansas, Center for Community Health and Development. The toolbox is an online searchable toolkit of information, resources, tools, and related on multiple community topics. Chapter 36 addresses evaluations. Available at:  
<https://ctb.ku.edu/en/table-of-contents/evaluate/evaluation>

Better Evaluation. *The Rainbow Framework*. The evaluation framework is an online searchable toolkit on evaluation that includes information, resources, tools, and related on a full range of evaluation topics developed and maintained by an international collaboration with the core team based in Australia/New Zealand. Available at:

<http://www.betterevaluation.org/>

U.S. Department of Labor, Chief Evaluation Office (CEO). *Policy and Resources Webpages*. The CEO provides a wealth of information, some of which was cited or used in the toolkit. In particular, see the policy page and resources page. Available at:

<https://www.dol.gov/asp/evaluation/EvaluationPolicy.htm>

<https://www.dol.gov/asp/evaluation/Resources.htm>

U.S. Department of Labor, Employment and Training Administration (ETA). *Research and Evaluation Webpage*. ETA provides a range of evaluation resources, some of which were cited or used in the toolkit. See the main webpage for all that is available. Available at

<https://www.doleta.gov/research/>

U.S. Department of Labor, Employment and Training Administration (ETA). *WorkforceGPS*. This technical assistance platform provides evaluation information, tools, guides, resources within primarily two collections (Innovation and Opportunity Network collection and the Workforce System Strategies Collection). The following two webpages provide access to evaluation resources.

[https://ion.workforcegps.org/resources/2015/12/07/18/37/Research and Evaluation for Continuous Improvement](https://ion.workforcegps.org/resources/2015/12/07/18/37/Research%20and%20Evaluation%20for%20Continuous%20Improvement) and <https://strategies.workforcegps.org/resources>

### 3. Behavioral Insight Studies

M. Darling, et. al. (April 2017). "Practitioner's Playbook for Applying Behavioral Insights to Labor Programs." Mathematica Policy Research for US DOL. Princeton, NJ.

J. Lefkowitz, et. al. (May 2017). "Using Behavioral Insights to Strengthen Labor Programs Lessons Learned." Mathematica Policy Research for U.S. DOL. Princeton, NJ.

### 4. Cost Studies

H. M. Levin, C. Belfield, F. Hollands, A. B. Bowden, H. Cheng, R. Shand, and Y. Pan. (2012). *Cost-Effectiveness Analysis of Interventions that Improve High School Completion*. Teachers College, Columbia University, New York.

H. M. Lewin, E. Garcia, and J. Morgan. (2012). *Cost-Effectiveness of Accelerated Study in Associate Programs (ASAP) of the City University of New York (CUNY)*. Columbia University, New York.

H.M. Levin and P.J. McEwan. (2001). *Cost-Effectiveness Analysis: Methods and Applications*, Second Edition. Sage Publications, Thousand Oaks, CA. [Includes information on both cost-effectiveness and cost-benefit analysis.]

P. Z. Schochet, J. Burghardt, and S. McConnell. (2006). "Impact and Benefit-Cost Findings Using Survey and Summary Earnings Records Data: Final Report." Mathematica Policy Research, Princeton, NJ.

## 5. Data Analytics

See the Commission on Evidence-Based Policy report listed above, and other reports and white papers on the CEP website. Available at:

[www.cep.org](http://www.cep.org)

M. Zook, et.al. (March 2017). “Ten Simple Rules for Responsible Big Data Research.” *PLOS Computational Biology*, 13(3):e1005399. Available at:

<http://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1005399>

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## 6. Implementation Studies

The National Implementation Research Network (NIRN) is a center that supports research and prepares resources on measuring implementation. Available at:

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J. Century, M. Rudnick, and C. Freeman. (2010). “A Framework for Measuring Fidelity of Implementation: A Foundation for Shared Language and Accumulation of Knowledge.” *American Journal of Evaluation* 31:2.

A. Werner. (2004). *A Guide to Implementation Research*. The Urban Institute Press, Washington, D.C.

M. Lennon and T. Corbett. (2003). *Policy into Action: Implementation Research and Welfare Reform*. The Urban Institute Press, Washington, D.C.

M. Scheirer and E. Rezmovic. (1983). “Measuring the Degree of Program Implementation: A Methodological Review.” *Evaluation Review* 7:5.

## 7. Interrupted Time Series

D. Ho, K. Imai, G. King, and E.A. Stuart. (2007). “Matching as Nonparametric Preprocessing for Reducing Model Dependence in Parametric Causal Inference.” *Policy Analysis*, 15, 199-236.



V.J. Hotz, G.W. Imbens, and J.A. Klerman. (2006). "Evaluating the Differential Effects of Alternative Welfare-to-Work Training Components: A Re-Analysis of the California GAIN Program." *Journal of Labor Economics*, 24:2 (July):521-566.

H.S. Bloom. (2003). "Using 'Short' Interrupted Time-Series Analysis to Measure the Impacts of Whole-School Reforms: With Applications to a Study of Accelerated Schools." Manpower Demonstration Research Corporation, New York.

H.S. Bloom. (1999). "Estimating Program Impacts on Student Achievement Using 'Short' Interrupted Time Series." Manpower Demonstration Research Corporation, New York.

## 8. Logic Models

B. Lawton, P.R. Brandon, L. Cicchinelli, and W. Kekahio. (2014). "Logic Models: A Tool for Designing and Monitoring Program Evaluations. (REL 2014-007)." Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Pacific. Available at: <http://ies.ed.gov/ncee/edlabs>

M. Nelson, D. Cordray, C. Hulleman, C. Darrow, and E. Sommer. (2012). "A Procedure for Assessing Intervention Fidelity in Experiments Testing Educational and Behavioral Interventions." *Journal of Behavioral Health Services & Research*.

L. Knowlton and C. Phillips. (2012). *The Logic Model Guidebook: Better Strategies for Great Results*. Second Edition. Sage Publications, Thousand Oaks, CA.

A. Cassata-Widera, J. Century, D.Y. Kim.. (2011). "Rigorous measures of implementation: A methodological framework for evaluating innovative STEM programs." Presentation at the SREE Fall 2011 Conference, Washington, D.C.

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W. K. Kellogg Foundation. (2004). *Logic Model Development Guide*. Available at: <http://www.wkkf.org/knowledge-center/resources/2006/02/WK-Kellogg-Foundation-Logic-Model-Development-Guide.aspx>

McLaughlin, J., and Jordan, G. (1999). "Logic Models: A Tool for Telling Your Program's Performance Story." *Evaluating and Program Planning*, 22, 65-72.

## 9. Outcome Studies

J. McDavid, I. Huse, and L. Hawthorn (2006). *Program Evaluation and Performance Measurement: An Introduction to Practice*. 2nd Edition, Sage Publications, Thousand Oaks, CA.



R. DeVellis (2003). *Scale Development: Theory and Applications*. 2nd Edition. Sage Publications, Thousand Oaks, CA.

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J. King, L. Morris, and C. Fitz-Gibbon. (1987). *How to Assess Program Implementation*. Sage Publications, Thousand Oaks, CA.

## 10. Power Analysis

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[www.wtgrantfoundation.org](http://www.wtgrantfoundation.org)

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## 11. Quasi-Experimental Studies

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## 12. Randomized Controlled Trial (RCT) Studies

V. Alferes (2012). *Methods of Randomization in Experimental Design*. Sage Publications, Thousand Oaks, CA.

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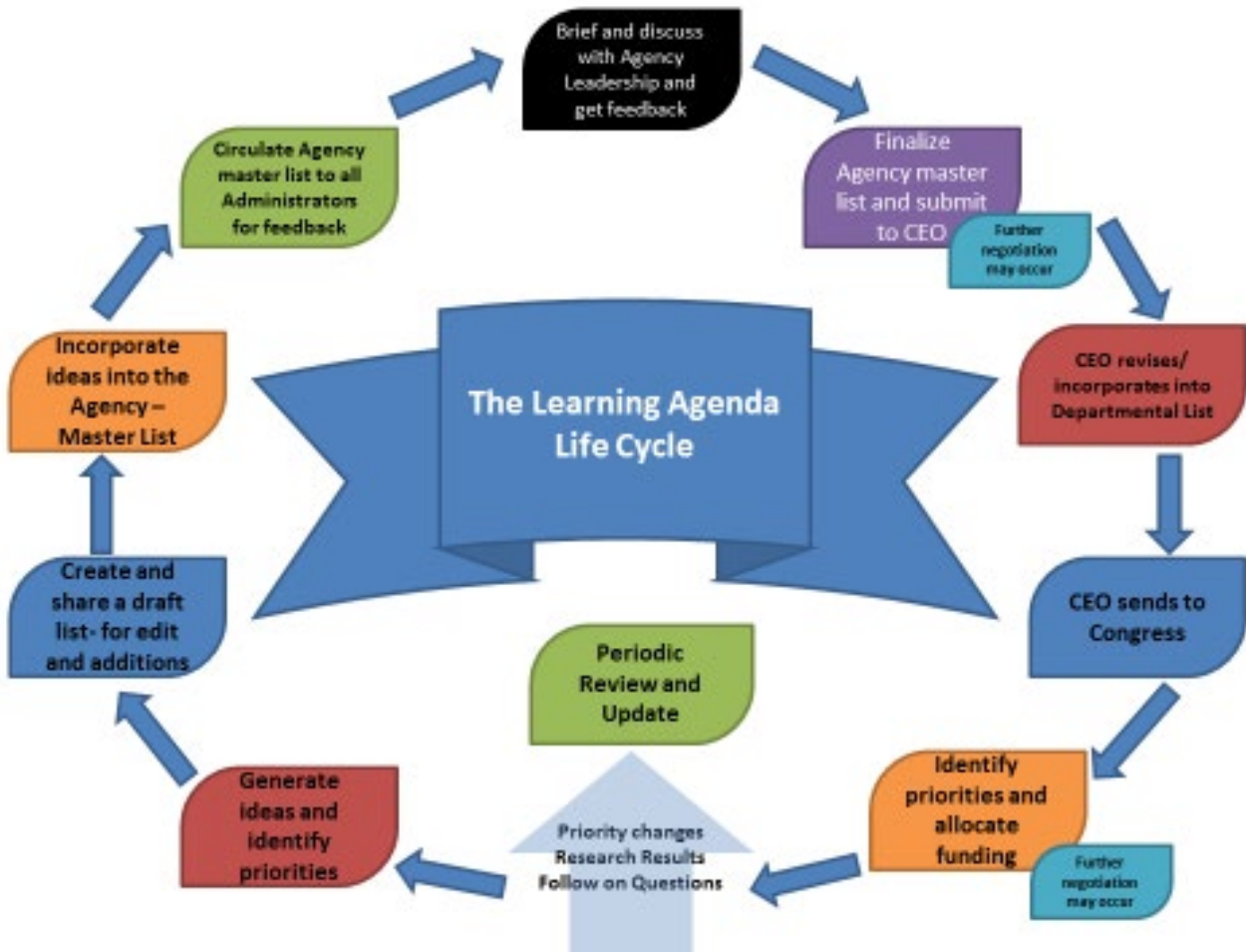
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## 13. Theory of Change

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J. Reisman and A. Gienapp. (2004). "Theory of Change: A Practical Tool for Action, Results and Learning." Organizational Research Services, Seattle, WA. Available at <http://www.aecf.org/upload/publicationfiles/cc2977k440.pdf>.

## APPENDIX D: The Learning Agenda Cycle

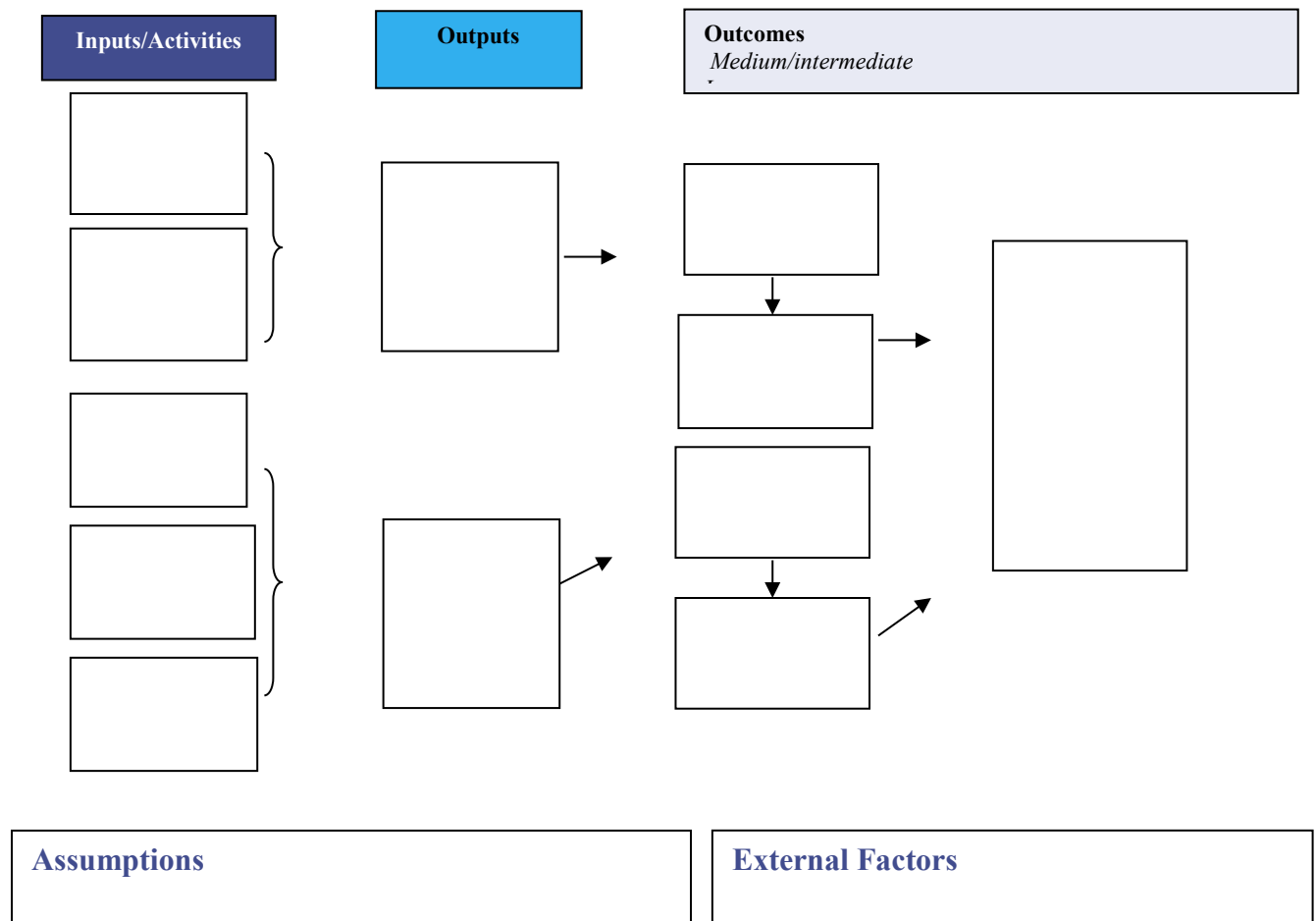


## Appendix E: Logic Model Template

Program/service/interventions: \_\_\_\_\_ (name) \_\_\_\_\_ Logic Model

(Use text boxes to describe how a program, services or series of interventions within the context of a given situation; add/change boxes and arrows, as needed)

Situation:



## Appendix F: Glossary of Terms

The glossary contains definitions for common evaluation terms and concepts. The glossary is not comprehensive, but the terms and concepts included are some of the most frequently used in evaluation design, implementation, and analysis. Terms are in alphabetical order.

**Attrition:** Loss of subjects from the study sample over the course of the evaluation. There may be many causes for attrition including, for example, program drop-out or relocation.

**Baseline Data:** Information collected about study participants prior to program participation or random assignment. Baseline data can be used to describe the study sample and measure participant progress.

**Comparison Group:** A comparison group is a group of study participants whose outcomes and experiences are compared to the treatment group. In an experiment, the comparison group is either exposed to a different treatment or to no treatment (a no-treatment comparison group is called a control group). A control group is created randomly.

**Cost Allocation:** Cost allocation is a management tool that involves establishing a budgeting and accounting system with which program managers can determine a unit cost, or cost per unit of service. The analysis includes documentation on program operational costs at the per-participant or per-system level, and looks only at the costs of a program. In most cost analyses of employment and training programs, the analysis focuses on unit costs (e.g., per participant, enrollee, or FTE position).

**Cost-Effectiveness Analysis:** A type of evaluation research that compares program costs to program outcomes. Cost-effectiveness analysis examines costs in terms of a single outcome. This outcome is not monetized. In the context of an employment and training program, the outcome could be placement, employment (ever employed), or employment meeting specific criteria (e.g., in terms of wages, benefits, or retention). A cost-effective program is one that delivers its key outcome at a reasonable cost per outcome (i.e., at a cost that is similar to or less than comparable programs).

**Generalizability:** The extent to which the study's conclusions based on the sample can be said to represent results for the entire population from which the sample was drawn.

**Implementation Study:** An implementation study illuminates and explains “what is happening and why” in the design, implementation, administration, operation, services, and outcomes of social programs. This type of study can provide context and information that makes impact evaluation results more useful. Findings from implementation research can be used to inform future program development or replication.

**Informed Consent:** The agreement given by study participants to take part in the study after having been informed of the nature of the research.

**Inputs:** Resources that go into a program, such as grant funds, personnel, and equipment.  
**Institutional Review Board (IRB):** A review body consisting of researchers, representatives of the research subjects, and individuals knowledgeable in the rights of human subjects, established or designated by an entity to protect the welfare of human subjects recruited to participate in research.

**Interrupted Time Series:** A non-experimental design in which outcomes are measured for a group of participants multiple times, both before and after the intervention. This approach is similar to a pre-post-test design except that measurements are taken at multiple points both before and after the intervention, which provides greater confidence that the outcomes after the intervention resulted from the intervention and not random fluctuation.

**Intervention:** The program, project feature, or innovation that is being studied.

**Logic Model:** A description of a program/process that includes a conceptual framework showing the activities and methods being used to achieve relevant outcomes. It provides an overview of a program/process and identifies key components (i.e., the active “ingredients” that are expected to be critical to achieving the relevant outcomes). The logic model also describes the relationships among the key components and outcomes and can be displayed in the form of graphic and/or by textual descriptions.

**Net cost:** This is the gross cost of the program minus the cost of providing comparable services to the control or comparison group with which the impact estimates are made. Typically, the control or comparison group receives fewer or less intensive services than program participants, but the cost of comparable services is not zero. Thus, the net cost is less than the gross cost.

**Outcomes:** The intended results of a process or program (including changes in conditions, such as employment, earnings, or income, as well as changes in attitudes, values, and behaviors).

**Outcome Study:** Examines the changes in targeted conditions, attitudes, values, or behaviors between baseline measurement and subsequent points of measurement. Changes can be immediate, intermediate, or long-term. An outcomes study seeks to provide information on how individuals fared in the program without attributing causality.

**Outputs:** What is produced that can be easily described and quantified as a result of program activities (for example, numbers of workshops held or people trained).

**Power:** Power refers to the ability of a study to detect meaningful program impacts at a given level of statistical certainty.

**Power Analysis:** A power analysis is used to determine the required sample sizes necessary to reach statistical conclusions (also known as statistical significance). Usually, the results of a power analysis are expressed as Minimum Detectable Impacts (MDI) or Minimum Detectable Effects (MDE). The MDI allows the researchers to know the level of impact the new intervention must have on an individual’s desired outcomes, such as earnings and employment, for the impact to be detected with a given sample size and specified probability of error. A power calculation is a calculation that estimates, given a specific sample size and analysis design, how likely it is that a program effect will be significant.

**Pre-Post Data Analysis:** A type of outcome study where behavior before a program (or a subject’s participation in it) began (pre-program) is compared to behavior at a point after the program was completed (post-program).

**Qualitative Data:** Non-numerical data that provides detail and description (e.g., data from interviews or focus groups).

**Quantitative Data:** Numeric data that can be analyzed using statistical methods (i.e., data that can be counted, scored, and categorized).

**Quasi-Experimental (QE) Study:** A research design with a comparison group that is similar to the group receiving the intervention in important respects but that does not receive the services being tested. QED designs attempt to approximate an experimental design by using a comparison group, but they do not use random assignment to create a control group that is identical to those in the treatment group.

**Randomized Controlled Trial (RCT) Study:** A research design in which participants are randomly assigned by lottery to a treatment group that receives services or a control group that does not receive services (or to one of two or more treatment groups). The difference between the average outcome for the treatment group(s) and for the control group is an estimate of the effectiveness of the intervention. Most social scientists consider random assignment to be the only way to assure that observed effects are the result of a given program and not of other factors.

**Reliability:** The degree to which a measurement or measurement instrument produces consistent results over time.

**Representative Sample:** A sample that mirrors the population from which it was selected in all the respects potentially relevant to the study and its outcomes.

**Sample:** A subset of a larger population that is used to study the population as a whole.

**Statistical Significance:** The mathematical likelihood that an observed effect is due to chance. Statistical significance is usually expressed as a p-value, with a smaller p-value meaning that the outcome is less likely to be due to chance and more likely is a true change or effect.

**Target Population:** The group larger than or different from the population sampled to which the researcher would like to generalize study findings.

**Theory of Change:** A theory of change is a way to explain your underlying understanding of the issue you are addressing—it clarifies why you are doing what you are doing. It is a description of a program that includes a clear identification of the population for which it is intended as well as the theoretical basis or description of the expected causal mechanisms by which the intervention should work. Theories of change are often represented visually.

**Treatment Group:** In an experiment, the treatment group is the group that receives the intervention(s) being tested. Also called the experimental group.

**Unit of Analysis:** The unit of analysis is the major entity (the “what” or “who”) that is being analyzed for the study. The unit of analysis can be, for example, individuals, groups, geographical units (e.g., cities, states, countries), or social interactions.

**Validity:** The degree to which a test accurately measures what it intends to measure.



