Starter Kit
5a: Building Logic Models

Navigating the Roadmap
Activity 5: Develop logic models.

Introduction
The development and use of a logic model is a critical step in understanding how evidence-based decision making (EBDM) will operate in a specific jurisdiction. A logic model helps lay out the shared understandings of what resources are available, what activities and changes will occur, what these activities and changes will produce, and what the intended long-term impacts of the initiative will be. The result of building a logic model is a picture that outlines the initiative’s theory of change, with a road map of what steps need to be taken in order to produce the desired impacts.

Logic models have six main components:
- **inputs**, or resources, which represent the existing resources (both financial and human), policies, practices, facilities, and capabilities that a jurisdiction has in place to support the implementation of EBDM;
- **activities**, which represent the specific strategies to be undertaken and implemented;
- **outputs**, which specify the immediate results that occur as activities and strategies are implemented (e.g., changed policies and practices, adoption of new tools/protocols, number of people trained, number of cases in which risk assessments are administered);
- **outcomes**, which serve as indicators that change is occurring at key decision points in the justice system as a result of the activities and which demonstrate that EBDM has been implemented at the system, agency, and case levels; and
- **impacts**, which define the types of long-term results that are anticipated and that can be measured as a result of implementing EBDM.

In addition, because the logic model is intended to be a roadmap, the contextual conditions need to be considered. Contextual conditions represent the environment in which the local justice system operates and can include political, economic, social, cultural, or other factors.

For the EBDM initiative, the logic model should reflect implementation and desired change at the system level (i.e., a system logic model). The model that each jurisdiction develops will incorporate the resources, activities, etc. that are currently

The Logic Model as a Motivator
“The logic model, approached with integrity, encourages its developers to stretch their imagination and be accountable to their vision. For us, the logic model forced us to think harder and to be more specific about the results and how to measure them. It denied us the option of settling for platitudes or unquantified commitments.”

– Policy Team Member, Milwaukee County, Wisconsin
being used to reach the identified harm reduction goals as well as the new activities that are being planned.

**Purpose**

Building a logic model has two purposes:

1. It helps facilitate the planning process by providing a mechanism for linking assumptions about how EBDM will work and the intended causal relationships between activities and impacts.
2. It provides a tool for managing the implementation and evaluation of EBDM activities. Because EBDM can, and should, be implemented at multiple levels, separate logic models should be developed to represent EBDM at the system and agency levels.

The system-level logic model will provide an overall picture of the types of systemic activities and policy changes that will need to occur in order to achieve the jurisdiction-wide impacts that are expected with regard to harm reduction. The purpose of the agency-level logic model is to provide each entity and agency in the justice system with a plan for what activities the agency will need to undertake to move toward EBDM, what the outputs of these activities are, and how these will impact the stakeholders’ overall goal of harm reduction.

In addition to providing a graphic illustration of the causal relationship between activities and impacts, the component parts of the model also provide a sense of temporal order. In other words, the logic model can be used to show what activities or outputs need to occur before others can begin.

**Participants**

Initial work on the logic model—deciding what the jurisdiction hopes to accomplish—is a group discussion, ideally among the policy team. After these decisions have been reached, staff internal to the agency(ies), usually with some background in conceptualizing, planning, and implementing policy or program initiatives; staff with similar backgrounds from colleague agencies or county administration; or outside experts can develop the logic models, with input from the policy team. The instructions below assume that staff within agencies in the jurisdiction will develop the logic models.

**Instructions**

In general, the approach to developing a logic model—whether for the overall system or for an individual agency—is to work as a group to answer several critical questions related to what is hoped will be accomplished. The team discussion should result in answers to the following questions:

*For the system model:*

- Why do you want to move toward an EBDM-based system? How will the jurisdiction benefit from an EBDM-based system (i.e., how will harm to jurisdictions be reduced)?
- What significant changes do you expect from the implementation of EBDM in terms of system operation?
- What types of information will convince you (and others, including the public) that positive change has occurred?
• What are the possible unintended consequences, both positive and negative, of implementing EBDM?
• What contextual (e.g., social, political, economic) conditions might facilitate or hinder your ability to achieve the types of impacts you’ve identified for both the system and the jurisdiction overall?

For the agency model:
• What do you hope to accomplish as a result of implementing EBDM?
• What outcomes does your agency need to achieve in order to contribute to the systemic impacts identified above?
• What significant changes will occur within your agency as a result of the implementation of EBDM?
• What types of information will convince you (and others) that you are achieving the outcomes that you’ve defined?
• What are the possible unintended consequences, both positive and negative, of implementing EBDM?
• What contextual (e.g., social, political, economic) conditions might facilitate or hinder your ability to achieve the types of impacts you’ve identified?

The answers to these questions form the basis for two of the logic model’s component parts: impact(s) and contextual conditions.

Logic models are built from right to left—first you define the impacts, then the outcomes and outputs, followed by activities, and then the inputs. Contextual conditions are defined last or in tandem with the other components because they help you identify other factors that might need to be considered in order to achieve the intended results.

An easy way to think about the development of a logic model is to think in terms of “if...then...” statements. For example, if we want to achieve these harm reduction impacts (e.g., reduced costs), then we will need to accomplish these outcomes (e.g., cost-saving measures). If we want to achieve these outcomes, then we will need to accomplish these outputs (e.g., number of low risk offenders diverted from the system). If we want to produce these outputs, then we will need to implement a specific activity or set of activities (e.g., pretrial risk assessment tool). And finally, if we want to implement this activity, then we will need to draw on these types of inputs/resources (e.g., funding to purchase a risk assessment instrument).

Good Impact and Outcome Statements

An example of a well-defined SMART impact is the following:

“75% of jail beds will be occupied by high risk offenders by 2013.”

A well-articulated outcome has the same characteristics as an impact. An example of a good outcome statement is the following:

“The number of offenders who successfully complete their sentence or treatment will increase by 75% within one year.”
The following instructions offer step-by-step guidance on the development of logic models.

**Step-by-Step Instructions:**

1. Using the logic model table in Appendix 1, list the intended impacts and outcomes and define them according to the SMART principle:
   a. Be **Specific**.
   b. Make them **Measurable** (i.e., quantifiable).
   c. Be **Action-oriented**.
   d. Be **Realistic**.
   e. Articulate a **Time** in which the change will occur.¹

2. Define what short-term accomplishments (outputs) will be needed in order to produce the intended outcomes and impacts. For example, if your jurisdiction expects that a certain number of joint policy decisions will be adopted, then two outputs might be the number/percentage of meetings attended by each policymaker and the number of policy decisions discussed.

3. For each output identified, define the activity that will produce it. For example, if the output is to have 100% of probation officers trained in the use of motivational interviewing techniques, then the activity might be to implement a motivational interviewing training program.

4. As you define which activities will be implemented, make a list of available resources, including financial, human, and existing materials and policies, that will be used to facilitate implementation of the activities. Make note of resources that might be lacking, and consider adding activities to the model that would either produce the resources or develop the capacity needed.

5. Once you complete the logic model table, make a list of the contextual conditions that are external to the justice system but that have an impact on its operation and ability to implement the planned activities or to achieve the desired outcomes and impacts.

6. The next step is to transfer the contents of the logic model table to a logic model diagram. Laying out the diagram of the logic model will require additional consideration of how all the defined elements are logically related to each other; it may identify areas where the logic is flawed and additional work is required. The logic model diagram will also help identify any gaps that need to be filled.

   a. Appendices 2 and 3 illustrate a basic logic model structure, representing the inputs, activities, outputs, outcomes, and impacts of two specific strategies that might be part of a site’s implementation plan.

¹ See also 6a: Measuring Your Performance and 6b: Developing a Systemwide Scorecard for more information on developing SMART goals and objectives.
7. Use the checklist in Appendix 4 to assess the quality of the draft logic model. Members of the policy team (or managers/line personnel in an agency) and others not involved in the development of the logic model should complete the checklist.
8. Revise and finalize the logic model as required.

**Tips**

- Logic models should be built during the planning process of the initiative to maximize their utility as a planning, management, and evaluation tool.
- Horizontal arrows between components represent causal links; vertical arrows within components generally represent temporal order.
- It may be useful to label each piece of information (i.e., each input, each activity, etc.) in the logic model table to make the transfer to the logic model diagram easier. One suggestion is to assign the first input the number “1.” Assign the number “1a” to the activity that is related to that input, “1b” to the output associated with the activity, and so forth. In the event that two or more elements flow from the previous one, then number these elements in a way that depicts their temporal order.
- Logic models are not static. The logic model that you are preparing represents what you think and want to happen, not what will happen. The logic model should be thought of as a working model that you will periodically revisit and update as you move toward implementation.
- To the extent the logic model consists of both activities that are already in place in support of the identified impacts and those that are being planned as part of the initiative, it may be useful to color code the planned activities to make clear the action items for moving forward (e.g., use black for components in place and red for proposed or new components).
Yamhill County Evidence-Based Decision Making Initiative
Phase III Logic Model

**INPUTS**
- Local Data
- Risk Assessment and Scoring Tools
- Policy Team-established relationship-defined
- Existing staff
- Other agencies (e.g. OJ Department of Corrections, Board of Parole and Post-Prison Supervision, Criminal Justice Commission)
- Existing evidence-based knowledge and local agency practices

**ACTIVITIES**
- Identify point in pre-sentence process to triage risk assessments
- Use static and dynamic risk assessment tools to determine risk to reoffend
- Implementation of specialty assessments for the Case Analysis Report
- Training for court staff, Deputy District Attorneys, defense on assessment tools
- Continued Portland PROXY risk assessment in pretrial population to provide baseline data as part of an automated booking system database
- Continue mental health, criminal risk, and substance abuse assessments at jail booking
- Develop data system capability to collect jail booking assessment results
- Implement court appearance verifiable system
- Implement a "broadened" process for individuals initially detained at arraignment
- Implement a pre-trial supervisory program model
- Review existing programs (community-based and jail resource inventory completed)
- Collect baseline data of current correctional clients and inmates programming needs
- Implement PROxy risk assessment at booking
- Ongoing assessment of whether services meet the Correctional Program Checklist standards
- Policy Team meetings on early disposition program and opportunities for diverting defendants and jail population within 18 months.
- Collect baseline data of current correctional clients and inmates programming needs
- Information sharing between law enforcement, community corrections, jail, and health and human services
- Create process to access client special needs information in jail
- Contact training for justice professionals, Health and Human Services on services/resources for persons with special needs
- Create more alternatives to incarceration for special needs populations
- Develop a list of community housing resources for special needs populations
- Case Analysis report provided to court in 80% of medium-high risk offenders
- 80% of low-risk offenders retained-out of Case Analysis process to determine risk to reoffend
- Assessment tools being used by court staff and District Attorney's Office to screen low risk defendants from Case Analysis process
- Court considers risk and need-based assessment information
- Top-tier criminogenic risk tools identified in 80% of high/medium risk cases
- Realignment of correctional programming to address risk and need factors
- 80% of staff will be trained on assessment tools
- Transition to Virginia Pre-Trial Risk Assessment Tool (VPRAT)
- 80% of defendants assessed using the VPRAT
- Screen for measurement of jail booking data developed
- 70% of released defendants receive court data review
- All lower risk individuals initially detained at booking reviewed for release within 5 days
- Decreased capacity by 10% for pre-trial supervision depending on available resources
- Identify and expand resources for supervision of released defendants
- Mechanisms developed for measuring recidivism, accountability, pre-trial misconduct, and court appearance rates
- Policies and procedures developed for qualifications and identification of opportunities for early disposition and/or diversion
- Increased access for engagement in approved treatment for medium to high-risk defendants who qualify for release
- Case Analysis report completed on high and medium risk offenders prior to sentencing
- Assessments of programming needs completed for 80% of inmates
- Increase in inmate referrals to 20% based on criminogenic assessments and re-entry plans
- Increased capacity based on volume of clients for which evidence-based treatment is appropriate
- 70% of treatment programs achieve score of "satisfactory" on Correctional Program Checklist
- Access to local 24-hour mental health screening and crisis response
- Increased collaboration and information sharing between criminal justice and social service agencies
- 80% of jail inmates with special needs for services eligibility
- Criteria for eligibility to court services received, and closing capacity fully utilized
- 5% increase in overall Oregon outcome measures and Yamhill County outcome data within 18 months
- Reduce recidivism (within 48 months)
- Increase recidivism (within 48 months)
- 10% of high-medium risk offenders have criminogenic needs treated within 18 months
- Based on available capacity, 80% receive correctional programming based on identified criminogenic needs
- Increased referral rates to treatment from 10% to 70% for medium and high risk offenders for criminogenic factors by removing them as conditions of supervision, within 18 months.

**OUTCOMES**
- Improved community safety, as evidenced by:
  - Reduced recidivism among high-risk offenders
  - 10% reduction of initial involvement of special needs individuals in the criminal justice system within 18 months.
  - 10% fewer re-arrests of special needs population within 18 months.
  - Improved criminal justice and mental health system responses and collaboration regarding special needs

- 5% reduction in community corrections caseload size within 18 months.

**SHORT-TERM OUTCOMES**
- Increased number of cases resolved by early disposition by 10% within 18 months.
- Increased number of placements and successful completions of diversion by 5% over 18 months.
- Increased pre-trial court appearance rate by 10% over 18 months.
- Increased enrollment of medium/high-risk offenders
- Increased pre-trial court appearance rate within 18 months.
- Reduced denial of low-risk pre-trial offenders by 10% within 18 months.
- Reduced denial of low-risk pre-trial offenders by 10% within 18 months.
- Reduced the impairment of psychotropic medications over 18 months.
- Reduced incidence of pre-trial misconduct by 10% over 18 months.
- 5% increase in court cases
- Reduced initial involvement of special needs individuals in criminal justice system, as evidenced by decrease in jail bookings by 10% over 18 months.
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**IMACTS**
- 5% increase in overall Oregon outcome measures and Yamhill County outcome data within 18 months
- Reduce recidivism (within 48 months)
- Increase recidivism (within 48 months)
- 10% of high-medium risk offenders have criminogenic needs treated within 18 months
- Based on available capacity, 80% receive correctional programming based on identified criminogenic needs
- Increased referral rates to treatment from 10% to 70% for medium and high risk offenders for criminogenic factors by removing them as conditions of supervision, within 18 months.

**Assumptions:**
- The professional judgment of criminal justice system decision makers is enhanced when informed by evidence-based knowledge.
- Every interaction within the criminal justice system offers an opportunity to contribute to harm reduction.
- Systems achieve better outcomes when they operate collaboratively.
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- Every interaction within the criminal justice system offers an opportunity to contribute to harm reduction.
- Systems achieve better outcomes when they operate collaboratively.

**Contextual Conditions:**
- Core values of the justice system.
- Local and state politics.
- Resources for services and treatment programs.
- Local economies.
- High level of community receptivity to new information.
- Poor state economic forecast.
- Local history of collaboration between agencies.
- State budget still pending.
- Average length of stay at local jail is limited.
- Pending legislation and grant opportunities for funding.

**Rad text indicates proposed activities**
**Black text indicates activities already underway**
Additional Resources/Readings


## Appendix 1: Logic Model Development Template

<table>
<thead>
<tr>
<th>Inputs/Resources</th>
<th>Activities</th>
<th>Outputs</th>
<th>Short-Term Outcomes</th>
<th>Impacts</th>
<th>Contextual Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing resources (both financial and human), policies, practices, facilities, and capabilities</td>
<td>Specific strategies to be implemented</td>
<td>Immediate results that occur as activities and strategies are implemented</td>
<td>Indicators, or benchmarks, that demonstrate changes are occurring as a result of the activities</td>
<td>Anticipated long-term harm reduction results</td>
<td>External factors that can facilitate or hinder the ability to implement the activity or achieve the intended outcomes and impacts</td>
</tr>
</tbody>
</table>
Appendix 2: Sample of Partial System-Level Logic Model for Pretrial Risk Assessment

<table>
<thead>
<tr>
<th>Inputs/Resources</th>
<th>Activities</th>
<th>Outputs</th>
<th>Outcomes</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding to develop/purchase risk assessment tool</td>
<td>Select pretrial risk assessment tool</td>
<td>100% of implementing staff trained</td>
<td>35% decrease in pretrial misconduct by defendants released by ROR, bond, or with supervision conditions</td>
<td>25% decrease in jail operating costs</td>
</tr>
<tr>
<td>Personnel to conduct risk assessment</td>
<td>Train staff how to use risk assessment tool</td>
<td>80% of prosecutors, defense, &amp; judges trained</td>
<td>40% decrease in jail beds occupied by low risk defendants awaiting adjudication</td>
<td>Overall cost savings of $80,000 to the entire criminal justice system</td>
</tr>
<tr>
<td></td>
<td>Train prosecutors, defense, &amp; judges on risk assessment</td>
<td>60% of defendants screened with pretrial risk assessment tool</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Begin conducting pretrial risk assessments of defendants</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Conduct quality assurance to ensure tool is being used correctly</td>
<td>Less than 5% of deviations from risk assessment results</td>
<td>80% of defendants released pre-trial who met conditions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use risk assessment scores to make pretrial release recommendations &amp; decisions</td>
<td>95% of release decisions consistent with risk assessment results</td>
<td>50% decrease in failures to appear</td>
<td></td>
</tr>
</tbody>
</table>

- 60% of defendants screened with pretrial risk assessment tool
- 95% of release decisions consistent with risk assessment results
- 50% decrease in failures to appear
- 80% of defendants released pre-trial who met conditions
- 40% decrease in jail beds occupied by low risk defendants awaiting adjudication
- 35% decrease in pretrial misconduct by defendants released by ROR, bond, or with supervision conditions
- 25% decrease in jail operating costs
- Overall cost savings of $80,000 to the entire criminal justice system
Appendix 3: Sample of Partial System-Level Logic Model for Using Risk Assessments to Inform Plea Negotiations

Inputs/Resources

- Funding to develop/purchase risk assessment tool
- Personnel to conduct risk assessment

Activities

- Select risk assessment tool
- Train staff (pretrial, probation, or other) how to use risk assessment tool
- Train prosecutors, defense, & judges on risk assessment
- Develop & implement process for providing risk assessment scores to prosecution & defense
- Begin conducting pre-plea risk assessments of defendants
- Conduct quality assurance to ensure tool is being used correctly
- Use risk assessment scores to make pretrial release recommendations & decisions

Outputs

- 100% of implementing staff trained
- 80% of prosecutors, defense counsel, and judges trained
- 60% of cases in which risk assessment information was provided to prosecution & defense pre-plea
- 75% of pleas guided by risk assessment
- Less than 5% of cases in which there was a deviation from the risk score (by source—i.e., prosecutor, defense, judge)

Outcomes

- 40% increase in offenders with risk assessments placed in EBPs tailored to needs
- 35% increase in medium & high risk offenders with criminogenic needs met at time of discharge
- 45% increase in compliance by offenders
- 80% of prosecutors, defense counsel, and judges trained

Impacts

- 20% decrease in costs for incarceration within 2 years
- 35% decrease in arrests for new offenses within 5 years

Funding to develop/purchase risk assessment tool

Personnel to conduct risk assessment
### Appendix 4: Logic Model Review Checklist

<table>
<thead>
<tr>
<th>Review Questions</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>The identified intended impacts are realistic and attainable.</td>
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<tr>
<td>The impacts, outcomes, and outputs are quantifiable.</td>
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<tr>
<td>There is a logical, clear connection between the outcomes and impacts.</td>
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<tr>
<td>There is a logical, clear connection between the outputs and outcomes.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>There is a logical, clear connection between the activities and outputs.</td>
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<tr>
<td>All available resources (inputs) needed for the activities have been accounted for in the model.</td>
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<tr>
<td>Possible contextual conditions that may affect the EBDM initiative and their impact have been identified.</td>
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<tr>
<td>The activities described in the model are realistically attainable.</td>
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<tr>
<td>The underlying assumptions for how the initiative will work are clearly discernible from the model.</td>
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<tr>
<td>There is consensus among the stakeholders that the model accurately describes how EBDM will achieve the desired results.</td>
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</table>