

# *eLogic Model to the Rescue*

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The above title calls for two explanations at the outset:

- (1) What is an “eLogic Model?” and,
- (2) What is the rescue mission?

An eLogic Model (as distinct from a typical logic model) is an “electronic,” or software driven, adaptation of the logic model. The eLogic Model offers so much new utility to the logic model, that it could very well revolutionize planning, reporting, case management, and, most importantly, the measurement of outcomes in the human services.

eLogic Models are intelligent, interactive logic model forms, connected to a back-end relational database. The relational database provides selective content to drop down, pick lists for the creation of eLogic Models. The “business logic” of the front-end forms provides a structured, guided tour to model creation, and provides “intelligent” selection. That is, the choices made on some drop-down pick-lists, programmatically determine the options available on other drop-down lists.

After an eLogic Model is created, it serves not only to describe a program of human service delivery (as a regular logic model does), it uniquely drives the database for supporting case management, and compiles reports on client demographics, needs presented, service outputs rendered, and outcomes attained. The reporting features of the eLogic Model generate both printout of reports, and transmission of summary findings via the internet to a central database where compilation across many agencies is possible.

The “rescue” at hand, is to bring system-wide rationality to the human services. There are basic, fundamental dilemmas that obscure rationality in large systems:

Centralization vs. Decentralization  
Individual vs. Group  
Purpose vs. Process  
Stability vs. Change

A view that makes sense from the top (Centralized) is often quite different from the view that makes sense from the bottom (Decentralized). Likewise, the Purpose for doing

<sup>1</sup> Frederick K. Richmond, President, The Center for Applied Management Practices, Inc. (CAMP) page 1

things and the Process for doing things often get mixed up. The Individual's efforts and the Group's efforts often become divergent. And finally, although Stability and Change are both necessary (and essential), there are few core precepts or vehicles in organization life that readily accommodate the existential presence of both. Each one of the dilemmas interacts with and exacerbates all the others.

Does this sound theoretical? It is not. It is very real and it is at the core of many difficulties in human service delivery. For example, everybody in the human services wants to see Outcomes. And, they would like to know how these were attained. But only the front line case workers actually see an outcome. Administrators and funding sources see numbers on reports. In order to create this "view for the top," case workers and support staff are required to engage in a "number crunching" process that is seemingly a diversion from helping clients attain outcomes (view from the bottom). And so, purpose and process begin to unravel. Sometimes, the effort to generate good numbers comes at the expense of the efforts to generate good outcomes.

Even more serious is the questionable credibility of how numbers are assigned. If a family of four purchase a house, is this a single outcome or four outcomes? If a client gets a part time job, and then a full time job, do we have two outcomes, or a further progression of a single outcome? Should we count the number of food banks, or the collective capacity of existing food banks? From individual to group, and from top to bottom, and for things centralized and decentralized, and for things rigid and flexible, there needs to be a common vernacular and convention for recognizing events and circumstances. For practicality sake, this "common mindset" should be readily available and easily operational at all levels of the organization.

The fundamental dilemmas outlined above have been problems for human organizations since the "Fall from Eden." The particular symptoms in today's human service systems are just another manifestation. So, how can the eLogic Model system mitigate against such powerful forces?

The most potent device for shaping human endeavors is the presence of "belief systems" (using the term loosely to include 'understandings of how things are'). Logic Models are, in effect, belief systems. They impute a basic understanding of client needs, service interventions, and the outcomes that should obtain. They have the added advantage of structure and discipline to verify the validity of their assertions. The eLogic Model facilitates the operation of logic models throughout an organization. By "operationalizing" a common set of beliefs, or understandings, throughout an organization or a conglomerate of organizations, tremendous gains can be realized for: quality of information, dedication to common goals, reliable delivery of services, efficiency in reporting performance, astuteness in planning, adjustment to unforeseen circumstances, and satisfaction with work.

## How Does the eLogic Model Work?

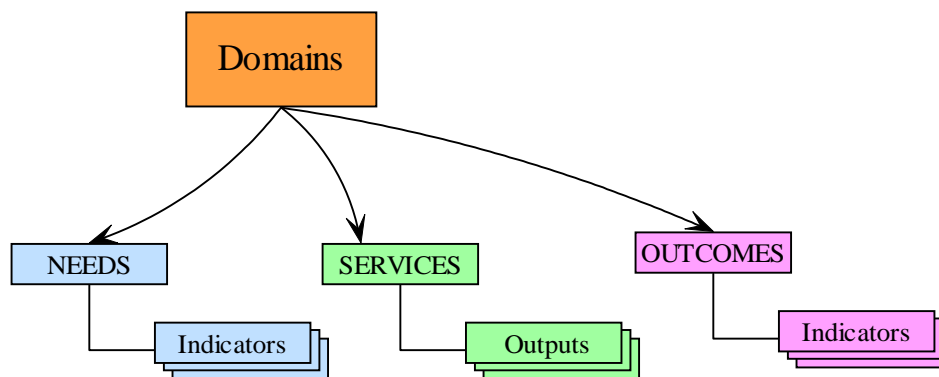
The eLogic Model is patterned after the essential features of the traditional logic model. In essence, a logic model depicts one or many causal sequences (putative) as follows:

NEED/PROBLEM → SERVICE/INTERVENTION → OUTCOME/RESULTS

With the traditional logic model approach, these “logic units” are assembled in a multi-column table to describe an agency’s intended plan of human service delivery. While the traditional logic model advances and clarifies thinking about Needs, Interventions, and Outcomes, it does little to actually gather information about agency performance or the “theory of change” implied by the model. In addition to being “static,” logic models are sometimes criticized for being: overly simplistic, lacking in detail, and cumbersome to create.

The eLogic Model overcomes these shortcomings with the “magic” of computers. eLogic Models are dynamic Management Information Systems (MIS). The structure of the MIS is automatically custom-generated by the user when he or she creates a logic model (or a series of logic models). The created models, then, produce data elements for generating client action plans, agency projections, and tracking actual performance in accordance with the logic model(s) specified. The eLogic Model also has a decision-tree hierarchy which allows for additional detail as needed and provides for specifying units of measure for agency outputs and outcomes. And, finally, the eLogic Model is easy to create and always consistent with agreed standards because the back-end database supplies the “universe” of model components in the form of drop down pick lists. The back-end “universe” of model components is also upgradeable by user control.

Schematically, the back-end database is depicted as follows:

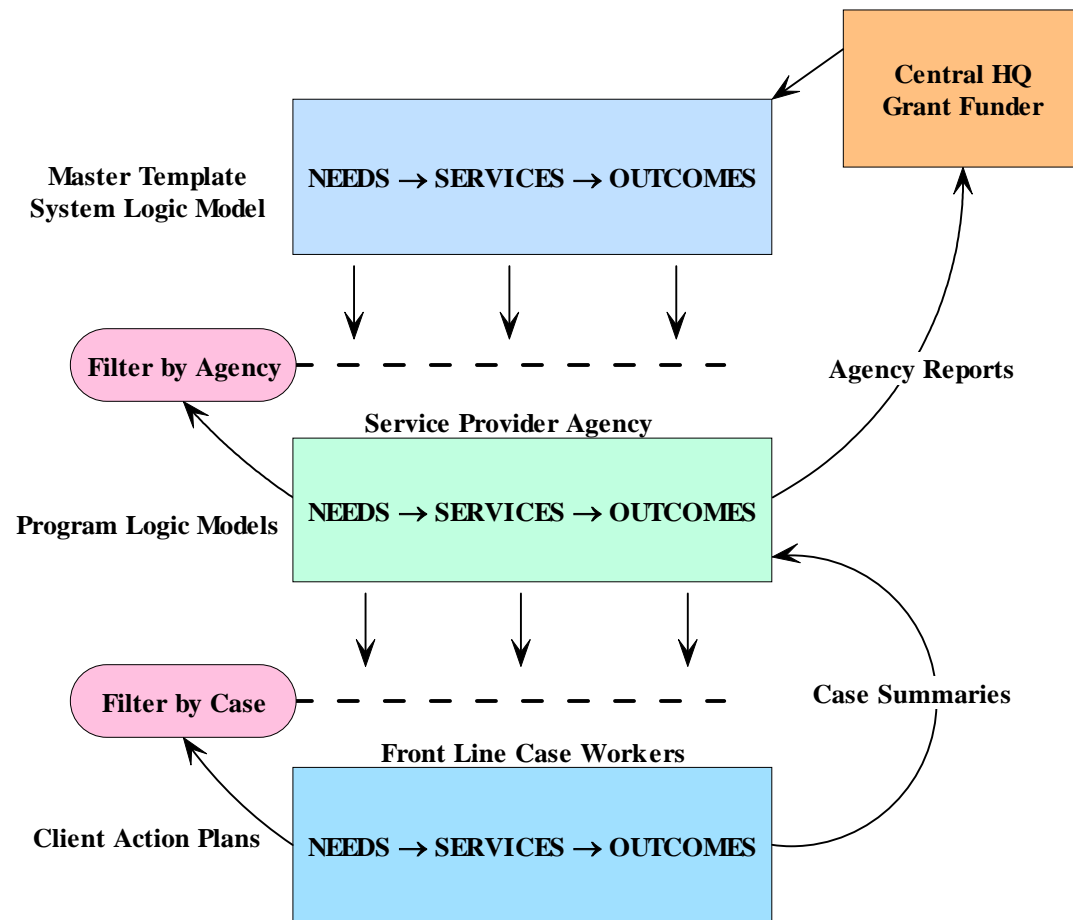


Each Domain is related to a set of Needs, and each Need is related to a set of Need Indicators. Each Domain is further related to a set of Services and each Service is related to a set of Outputs with units of measure. Finally, each Domain is also related to a set of

Outcomes and each Outcome is related to a set of Outcome Indicators with units of measure. Altogether, these form a master template of all possible Logic Models.

The Center for Applied Management Practices (CAMP) pre-loads the back-end database with dozens of Domains and the Needs, Services, and Outcomes that correspond. For any given deployment, however, these parameters can be modified and/or expanded to suit the circumstances of the service delivery system. The software gives control of such matters to the user.

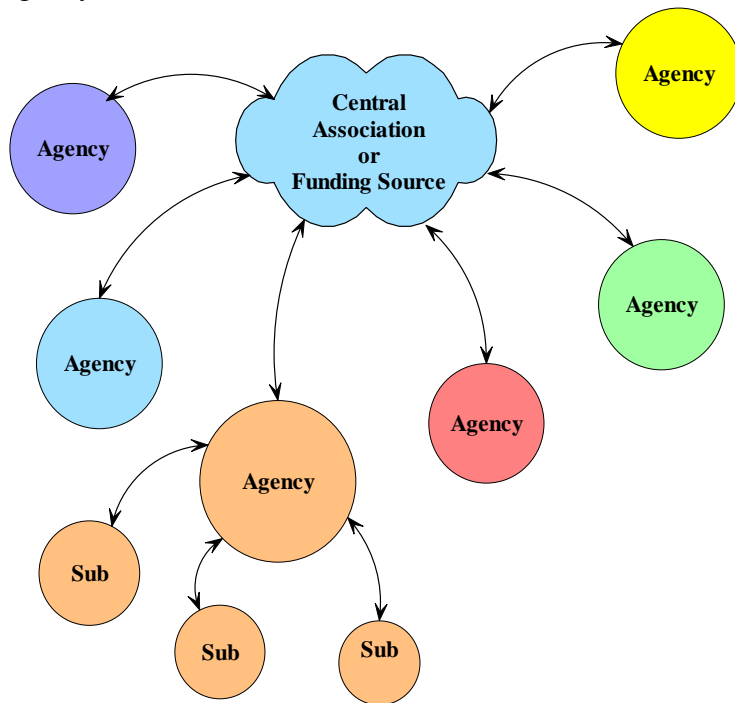
The logic model framework, with drop-down pick-lists, operates at three levels. First, it is used to populate a master template of logic model components; i.e., a System Logic Model. Second, it is used by provider agencies to create a service delivery plans for the near-term fiscal year; i.e., an Program Logic Model. And third, it is used at the client or case management level; i.e., an Action Plan Logic Model.



By this arrangement, there is a consistent throughput of information flow from a central point (funding source, state association, etc.) to a constellation of agencies, and finally to the level of actual service delivery within the agencies. Information flows in both directions. Flowing down (figuratively) the information contains vocabulary, syntax, and structured frameworks for generating data. Flowing up (figuratively) the

information contains highly organized data, generated with minimal input effort, compatible throughout the system, and readily convertible into usable knowledge.

Although the eLogic Model system can be used effectively by a single agency, it is especially designed for use among a constellation of agencies. The logic model format and the master template provide a core consistency that accommodates a wide scale use despite diversity from agency to agency, or even from program to program within an agency.



Each agency “carves out” a unique logic model to depict its particular Programs of service delivery and outcome goals. Among the agencies, there is likely to be some areas of overlap with other agencies; e.g., many agencies may address the same needs. The agencies, however, may employ slightly different sets of services to address these needs and may aim at more or less ambitious outcome goals.

Regardless of the similarities and differences from agency to agency, the eLogic Model

system makes it possible to aggregate data across all agencies to present a consolidated picture of the needs presenting, service outputs rendered, and outcome indicators attained. Data exchange within an agency occurs either through a server network, or a simple peer to peer network. Data exchange from agencies to the central point occurs via XML file transmissions via the internet (automated email protocols).

An upscale version of the eLogic Model, may accomplish all this via a secure web server with the added advantage of instantaneous live update throughout the entire system. The mini-version described here, operates on a distributed MS Access™ platform. While detail data are available with live update within an agency’s network, only summary data are transmitted out to the Central HQ, or funding source, etc.

### *Building Program Logic Models*

Upon receiving a copy of the eLogic Model system, an agency creates one or more logic models for their proposed programs and services. The process begins by

selecting a Domain from a pick-list of possible Domains. After selecting a Domain, the system filters out the set of possible Needs, Services, and Outcomes that could pertain to that Domain. The agency selects which Needs, Services, and Outcomes they intend to address in the near-term fiscal year. Upon selecting each Need, Service, and Outcome, there is a further drop down list of detail items to choose from to itemize Indicators of Need, Outputs of Service activity, and Indicators of Outcome goals.

In most instances, an agency or program operates in more than one Domain. So, the process is repeated for each Domain that the program pursues. At each selection point in the process, the agency also estimates a projected number of cases they anticipate for that item (number of cases presenting a certain Need, or receiving a certain Service, or attaining a particular Outcome) during the fiscal year.

Upon completion of the Program Logic Model, the system generates a printed copy of the entire logic model, and also generates a transmission to the Central HQ (funding source, or association) via the internet. This constitutes the first report, or a proposal of service delivery. At the Central HQ, models received from all agencies can be reviewed separately, or combined for a consolidated assessment of proposed service delivery.

As the agency implements the case tracking feature (described below), the Program Logic Models are updated with actual year-to-date performance data as often and frequently as the user desires. Periodically, the updated logic model can be transmitted to the Central HQ. The data files maintained at the agency are available for cross-tab analysis of any combination of factors in the logic model as well as client demographics. Only summary data are transmitted to Central HQ.

### *Implementing Case Tracking*

The Program Logic Models described above provide a framework for both planning and reporting. For planning, each Need, Service, and Outcome is identified and quantified with an estimated volume of cases. For reporting, each Need, Service, and Outcome is periodically summarized with subtotals of the actual volume of cases. The summary data for reporting can be input from external sources (by data entry into the Program Logic Models), or it can be generated automatically from the Case Tracking feature.

If the agency implements the Case Tracking feature, not only is day-to-day case management supported, but the summary subtotals of actual volume of cases, units of service, volume of outcomes attained, and demographic profiles are automatically generated for reporting.

The Case Tracking feature works by completing a client intake form. The intake form includes the typical information that a case worker would collect from a client, plus a utility for generating a mini-logic model (or action plan) for the client.

A needs assessment is performed by choosing appropriate Domains and selecting the Needs and Indicators of Need from drop-down, pick-lists. Similarly, the case worker chooses from the available Service/Outputs and the corresponding Outcomes and Outcome Indicators. Any number of Domains can be included in the case action plan. As the case work proceeds, the mini-logic model is updated by the case worker to manage the case.

The Case Tracking feature offers a number of utilities to assist case workers, thus making the use of the Case Tracker more than a data entry exercise. The Case Tracker provides a referral resource component that helps the case worker locate and follow through with client referrals. The Case Tracker has a “Tickler” function to set reminders for managing the case. The Case Tracker has a “case load” function to allow a case worker to get summaries of their case load, or to allow middle management to review and allocate resources among staff.

The Case Tracker compiles an organized collection of data about case work, clientele, referrals, service efforts, and outcomes, etc., that readily provides for analysis and feedback about any combination of factors in the agency’s service delivery operation.

Future releases of the e-Logic Model may include additional features to the Case Tracker, as needed; e.g., photo id, special assessments, printable consent forms, voice activated controls, etc.

## E-Logic Model Feature List

- Provides a common/global set of Needs, Need Indicators, Services, Outputs, Outcomes, and Outcome Indicators to be used in planning, reporting, and case management.
- Allow for creating unique Program Logic Models from the master template of global logic model components.
- Provides a reporting system across many agencies and many programs that have a compatible set of data elements representing Needs, Services, and Outcomes, as well as client demographics.
- Provides a multi-tier reporting system that obviates the need for data re-entry.
- Provides a case tracking feature that corresponds directly to the program planning level of an agency's mission and operations. The client action plans are actually mini-logic models filtered from the master model or the program logic models.
- Provides a system that can operate on either, a single PC, or a peer-to-peer network of PCs, or a server network at the local level.
- Provides a means of reporting summary statistics to a Central HQ where information can be consolidated from a constellation of agencies using basic email technology.
- Provides a system where the user can add or modify the essential data elements that the system handles. Users can add to the master logic model components, thus creating additional Domains, Needs, Services, Outcomes, and demographic elements.
- Provides a system whereby the basic software platform or infrastructure is readily and affordably available (MS Access™ 2003). Future versions are expected to be rendered as a compiled runtime that will not even require the user to own MS Access™.
- Provides a system where sensitive data do not leave the host agency. Only summary data are transmitted to Central HQ.
- Provides a system where case management functions provide the source data for agency and Central HQ without data re-entry. The system reporting may also work without implementing the Case Tracker, although tremendous efficiency and accuracy is gained by using the Case Tracker.