# MODULE 5 – Logic Model and Balanced Scorecard

This module outlines what logic models are, why they are useful, and how to create one. An example of a logic model can be found at the end of the module, as well as a short discussion and example of the Balanced Scorecard, a planning tool commonly used by organizations.

With the passing of the amended *Budget Transparency and Accountability Act* in 2001, Crown agencies in B.C. are legislated to provide accountability information in the three-year service plans to their stakeholders and the public. This accountability information requires that organizations demonstrate the effectiveness and efficiency of their business lines and programs. As a management tool, logic models can be used to tell the story of the organization's business, at the organizational level, the business line level, and at the program level. A logic model shows what an organization, business line, or program is doing, with what or whom, and why.

What is a logic model?

Generally, a logic model, through visual representation, presents a causal model of how an organization or a specific business line or program will progress under identified conditions. Therefore, logic models write the story of the organization's objectives, outputs, and outcomes. With directional arrows to demonstrate clearly the *causal* relationships between elements, logic models provide the information of how the organization, business line, or program is supposed to work in order to achieve the intended results.[1] The elements of the logic model are:

- Components (specific elements of the line of business/program)
- Implementation objectives (activities/resources)
- Outputs (measure of activity)
- Short, intermediate, and long term outcomes (results)

Component	Implementation objective	Outputs	Short-term outcomes	Medium-term outcomes	Long-term outcomes
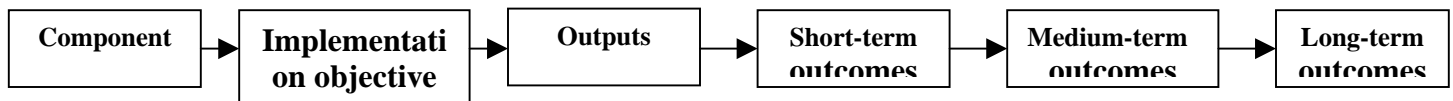
Organizations should remember that logic models can be created to write the story at the organization-wide level, as well as at the program level..

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[1] Kirkpatrick, S. (2001). The Program Logic Model: What, Why, and How?
http://www.charityvillage.com/charityvillage/research/rstrat3.html

Who creates logic models?

The creation of logic models should include, as much as possible, the relevant stakeholders. This might include managers, staff, evaluators, and representatives from the target group, and anyone else who might have knowledge or input to add to the business line/program being modelled. A group process, rather than an individual process, is recommended to promote the best use of knowledge and achieve relevant feedback, as well as ensure commitment and staff buy-in. Staff groups provide a valuable validation mechanism to ensure that the business line/program being modelled is accurate and feasible.

Benefits of using logic models in the planning process include:

- Building a common understanding of the line of business/program and the expectations for resources, customers reached, and results. Logic models are ideal for sharing ideas, identifying assumptions, team building, and communication;
- Identifying projects which are critical to goal attainment, redundant, or need to be modified;
- Communicating the place of a strategy in the organization or goal hierarchy, particularly those that occur at various organizational levels;
- Enhancing buy-in among stakeholders
- Identifying a balanced set of key performance measurement points;
- Increasing stakeholder understanding of goals, objectives, and strategies;
- Demonstrating how different elements of the program (activities, resources, outputs, outcomes) are linked;
- Helping to integrate business planning and evaluation through the identification of objectives and measures;
- Assisting in identifying unintended outcomes and consequences of the business line/program being modelled; and
- Clarifying the causal assumptions and rationale upon which the business line/program being modelled is based.[2]

Logic models address attribution issues

Logic models will help to answer the question "how will the organization know that the outcomes have been achieved?" They do this by identifying the key outputs and outcomes and thus provide a guide for identifying performance measures. Logic models will also decrease uncertainty and increase knowledge when dealing with attribution issues between outputs and outcomes and therefore the measurement plan can be based on the logic model(s) developed for the organization. Stakeholders and the organization should agree on the definition of success for the business line/program and how it will be

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[2] McLaughlin, J. A., and Jordan, G. B. Logic Models: A Tool for Telling Your Program's Performance Story. http://www.pmn.net/education/Logic.htm

measured. Organizations should use logic models with a level of detail that matches the detail needed in the measurement.[3]

How is a logic model created?

The following eight steps are suggested for creating logic models:

1. Put together a workgroup of approximately 6-10 relevant stakeholders (e.g., managers and staff);
2. Decide on the business line/program to be outlined in the logic model;
3. Collect all the relevant information and documentation concerning business line/program being modelled. This may include, but is not limited to, reports, planning documents, literature, and interviews with internal and external stakeholders;
4. Define the line of business/program: its context (e.g., internal/external influences), corresponding goals and objectives, resource allocation, and the problem(s) it is attempting to address (if applicable);
5. Put together the initial elements of the logic model (components, implementation objectives, and outputs). To map the relationship of one element to the next, the working group should constantly ask itself "How do we get here?" as well as using "if, then" statements to clarify the causal links. The working group should also constantly verify the accuracy and completeness of the information being used with the relevant stakeholders.
6. Outline the short, intermediate, and long-term outcomes of the business line/program being modelled. 'Directional' language is useful when forming outcomes (e.g., increase, decrease, expand, reduction in). Be specific, measurable, and realistic;
7. Verify the causality between elements. Consider the audience. It is suggested that non-recursive (one-way) causal links are appropriate, as they are easier to understand sequentially; and
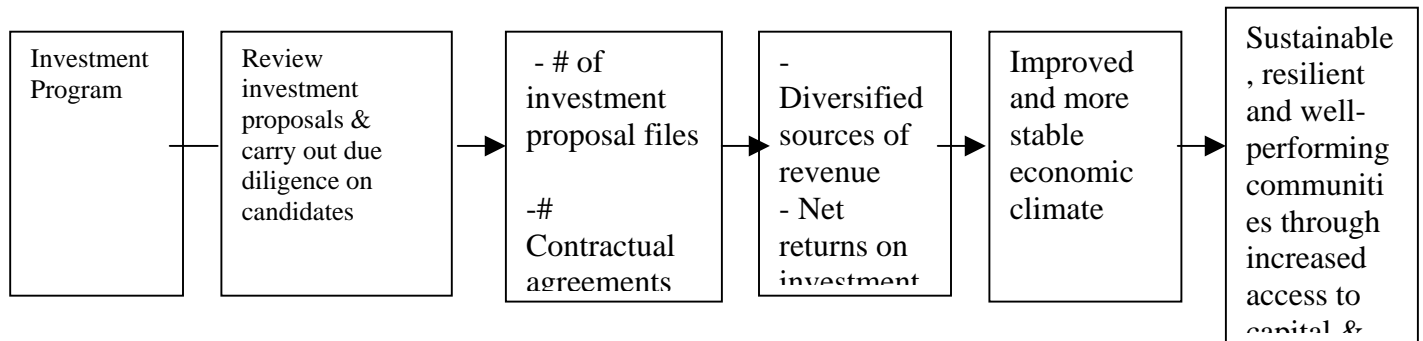8. After verification, adjust and modify as needed.[4]

There is not definitive approach to creating logic models. What may work for one organization may not for another. This module provides a suggested approach. Remember: Logic models are not static and can be changed as context and circumstances change (e.g., resource allocation).

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[3] Mayne, J. (2001). Addressing Attribution Through Contribution Analysis: Using Performance Measures Sensibly. Canadian Evaluation Society. 16 (1).
[4] Kirkpatrick, S. The Program Logic Model: What, Why, and How?
http://www.charityvillage.com/charityvillage/research/rstrat3.html

An example is outlined below[5]

COMPONENTS (Activities/ Resources)	IMPLEMENTATION OBJECTIVES (What needs to happen to result in outputs)	OUTPUTS (Quantifiable work produced from activities)	SHORT-TERM OUTCOMES (To increase, decrease etc.)	INTERMEDIATE OUTCOMES	LONG-TERM OUTCOMES
Investment Program	Review investment proposals & carry out due diligence on candidates	- # of investment proposal files -# Contractual agreements	- Diversified sources of revenue - Net returns on investment	Improved and more stable economic climate	Sustainable, resilient and well-performing communities through increased access to capital &

ENVIRONMENTAL INFLUENCES/CONTEXT (e.g., Reduced budget, economic downturn)

NOTE: Logic models can contain more than one output and more than one each of short, medium, and long term outcomes, depending on the complexity of the business line/program being modelled. It is advised, however, that outcomes link from specific to broad in nature, as can be seen from the above example.

Logic models and evaluation

Logic models may also be used in conjunction with evaluation methods as a resource for evaluating the performance story. As a segment of evaluation, it is suggested that the following questions be asked:
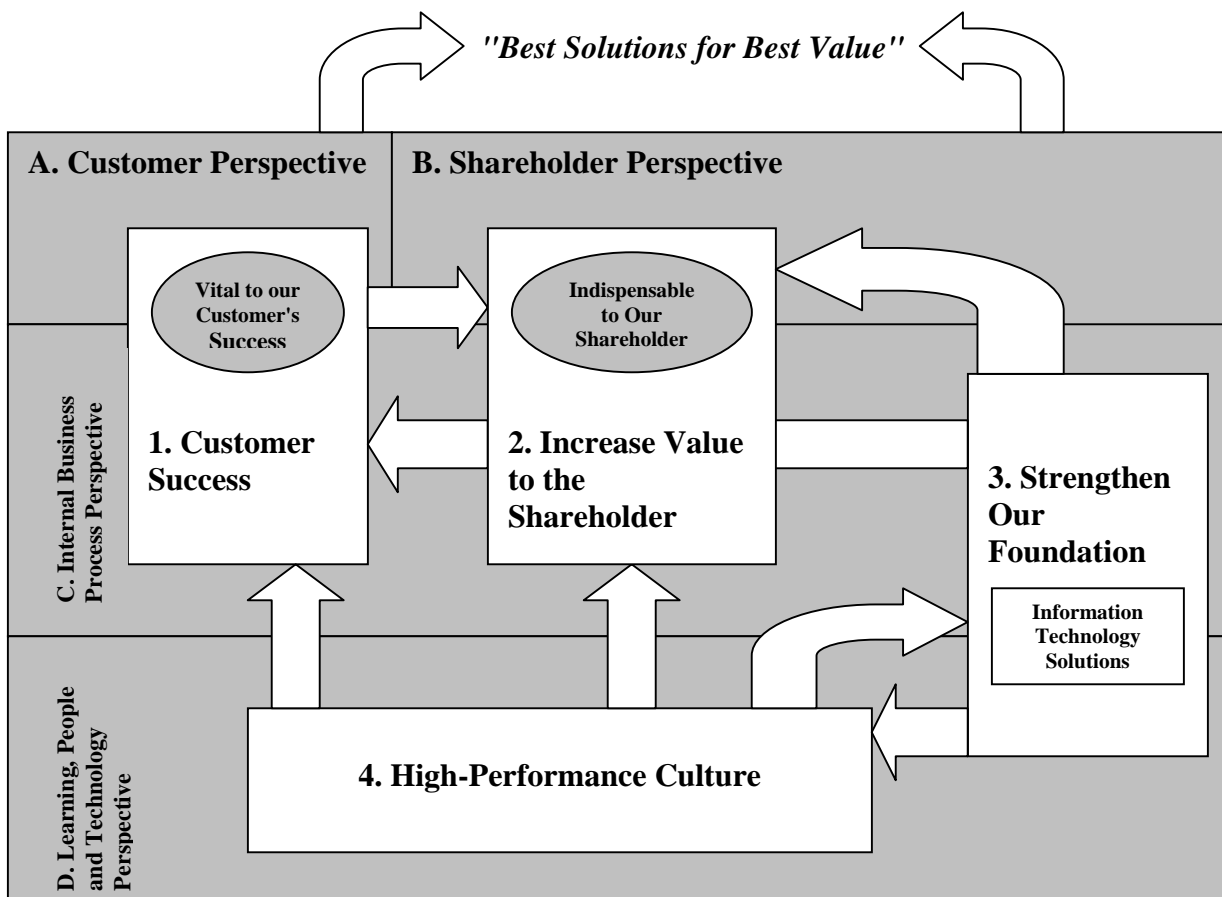
- Was each element proposed in the logic model in place, at the level expected for the time period? Are outputs and outcomes observed at expected performance levels?
- Did the causal relationships proposed in the logic model occur as planned? Is reasonable progress being made along the logical path to the outcomes? Were there unintended benefits or costs?
- Are there any rival hypotheses that could explain the outcome/result? If so, these need to be identified.
- Did the line of business/program reach the expected customers and are the customers reached satisfied with the program services and products?[6]

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[5] Adapted from High-Level Corporate Logic Model: Investment Program, Columbia Basin Trust. Copyright Grant Thornton.

The Balanced Scorecard

Many organizations use the Balanced Scorecard in a modified or adapted form as a tool for integrating strategic planning and performance management by focusing on the long-term objectives of the organization as a whole. The strategy map of the Balanced Scorecard can be used to create an organization level logic model to identify goals, objectives, strategies, and their corresponding performance measures required for the organization to achieve strategic success.

The strategy map of the Balanced Scorecard is a visual representation of an organization's strategy and the processes and systems necessary to implement that strategy. The strategy map is used to develop the Balanced Scorecard. An example of a strategy map taken from the British Columbia Buildings Corporation Service/Strategic Plan 2003/04 - 2005/06 is seen below:

"Best Solutions for Best Value"

A. Customer Perspective   **B. Shareholder Perspective**

Vital to our Customer's Success

Indispensable to Our Shareholder

C. Internal Business Process Perspective

1. Customer Success

2. Increase Value to the Shareholder

3. Strengthen Our Foundation

Information Technology Solutions

D. Learning, People and Technology Perspective

4. High-Performance Culture

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[6] McLaughlin, J. A., and Jordan, G. B. Logic Models: A Tool for Telling Your Program's Performance Story. http://www.pmn.net/education/Logic.htm

A Balanced Scorecard is a tool that translates an organization's mission and strategy, as represented in the strategy map, into a comprehensive set of performance measures and targets. This then provides the framework for the organization's strategic measurement and management system. The Balanced Scorecard concept is built upon the premise that what is measured is what motivates organizational stakeholders to act. Ultimately all of the organization's activities, resources, and initiatives should be aligned to the strategy. The Balanced Scorecard achieves this goal by explicitly defining the cause and effect relationships between objectives, measures, and initiatives across the following four perspectives:

1. *Customer.* This perspective focuses on the organization's ability and responsibility to provide its programs and services, as well as customer service and satisfaction;
2. *Internal Business Processes.* This perspective focuses on the internal management activities required to achieve strategic objectives. Internal Business Processes are the mechanisms through which performance expectations and targets are achieved;
3. *Learning and Growth.* This perspective focuses on employee ability and the effect of organizational alignment in supporting the achievement of organizational goals; and
4. *Financial.* This perspective focuses on cost efficiency (the ability to deliver maximum value to the customer) and/or long-range targets for financial objectives.[7]
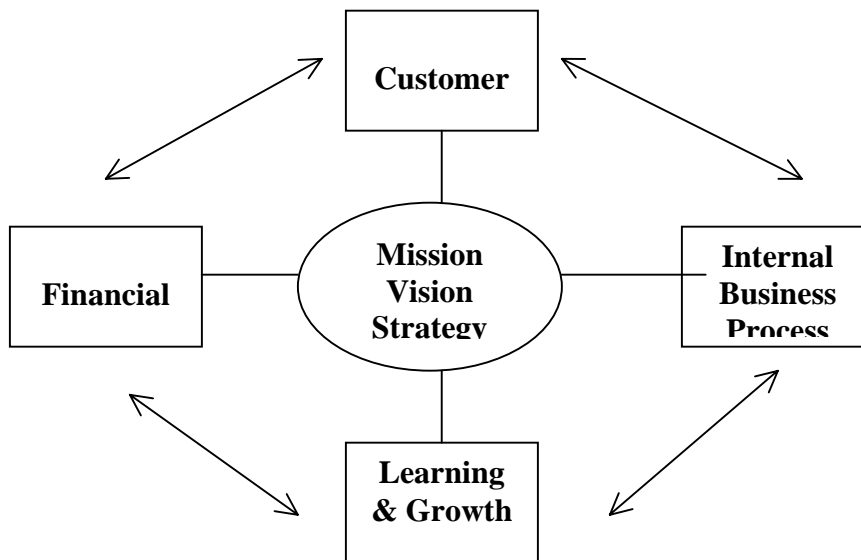
However, the Balanced Scorecard has evolved since it was first introduced in 1992 as a tool for measuring organizational performance. It was originally proposed to overcome the limitations of managing only with financial measures. In 2000, the Balanced Scorecard was refined to move beyond a performance measurement system to become the organization framework for a strategic management system. In effect, the Balanced Scorecard becomes the operating system for a new strategic management process.

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[7] Kaplan, R. and Norton, D. (1996). *The Balanced Scorecard.* Mcgraw-Hill Ryerson Ltd.
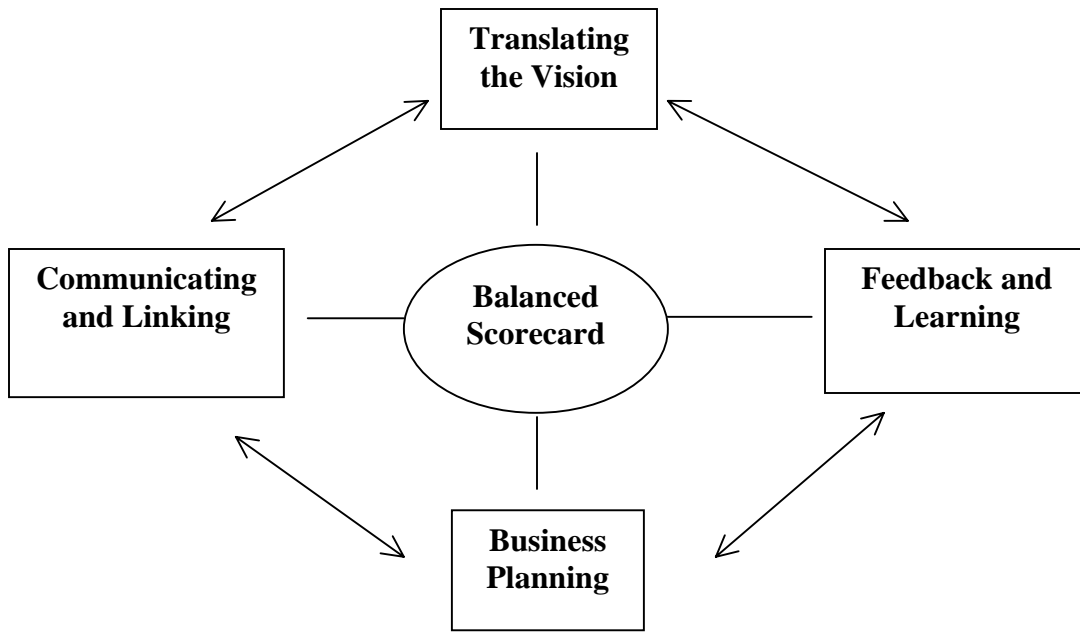
Norton and Kaplan suggest that Strategic-Focused Organizations organize a "strategy map" framework of cause and effect between its strategic objectives, operationalize these objectives with measures which, considered as a group, comprise a Balanced Scorecard, and use the Balanced Scorecard to place strategy at the center of their management processes. The authors suggest that organizations use the following five guiding principles when using the Balanced Scorecard as a framework for a strategic management system:

1. *Translate the Strategy to Operational Terms*: Strategy maps, Balanced Scorecards
2. *Align the Organization to the Strategy*: Corporate role, business unit synergies, and shared service synergies.
3. *Make Strategy Everyone's Everyday Job*: Strategic awareness, personal scorecards, and balanced paychecks.
4. *Make a Strategy a Continual Process*: Link budgets and strategies, analytics and information systems, and strategic learning.
5. *Mobilize Change through Executive Leadership*: Mobilization, governance process, and strategic management system.[8]

For further information on strategy mapping, Balanced Scorecards, and the five guiding principles can be located at http://www.bscol.com.

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[8] Kaplan, R.S. and Norton, D.P. (2000). The Strategy-Focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment. Harvard Business School Press: Boston, Massachusetts.