



USER GUIDE & TOOLS

Public Health Practice Improvement Planning

Developed by

**The State Hygienic Laboratory
at the University of Iowa**

with

The Iowa Quality Center

This publication was supported by the Association of Public Health Laboratories under Cooperative Agreement Number #1U60HM000803 from CDC. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC.

Table of Contents

Acronyms.....	3
Key Definitions.....	4
Introduction.....	5
Background	7
Using the Model & Tools.....	14
Benefits of Sharing Model with Additional System Partners.....	26
Appendices.....	27

Acronyms

PHL..... Public Health Laboratory

APHL Association of Public Health Laboratories

CDC..... Centers for Disease Control and Prevention

L-SIP..... Laboratory System Improvement Program

SHL..... State Hygienic Laboratory at the University of Iowa

IQC Iowa Quality Center

IDPH..... Iowa Department of Public Health

PHP Public Health Practice

Key Definitions

Purpose: The fundamental reason that an organization, program or enterprise exists. Inspires and guides the setting of values.

Mission: The overall function of an organization, program or enterprise. Answers the question, “What are you attempting to accomplish?”

Vision: The desired future state of an organization, program or enterprise. Describes where it is headed, what it intends to be, and how it is perceived in the future.

Values: The guiding principles and behaviors that embody how an organization, program or enterprise and its people are expected to operate. They reflect and reinforce the desired culture, support and guide the decision-making of your workforce, and help accomplish the mission and attain the vision.

Goal/Objective: A result or desired end-point to be achieved by an organization, program, or enterprise to support the vision of an organization, program, or enterprise; ensure improvement within the PHL system, and align all stakeholders with a clear awareness of what must be done.

Strategies/Sub-strategies: Planned actions, activities, or projects to support a specific Goal/Objective, including responsible person(s), timelines for completion, and performance metrics/targets. A key component to developing Action Plans.

Tactics: Planned daily actions, activities, and projects to support Strategies/Sub-strategies, including responsible person(s) and timelines for completion. A key component to developing Action Plans.

Performance Metric/Target: Measures level of success in achieving a specific Goal/Objective or Strategy/Sub-strategy and the specific end-point indicating achievement.

Intervention/Action Plans: Plans containing Strategies/Sub-strategies, and Tactics to support the vision of an organization, program or enterprise, and achieve defined Goals/Objectives.

Introduction

A primary challenge in public health practice is directly related to the nature of this multidisciplinary field - it is often difficult to coordinate and align efforts of varied public health partner organizations along a single, cohesive strategic or program plan. For example, Public Health Laboratory (PHL) systems are comprised of not only state public health laboratories, but also clinical, environmental, food safety, agricultural and veterinary laboratories. The PHL system also includes relevant stakeholders such as those who initiate diagnostic testing, those who perform the testing and those who ultimately use the test results, which encompasses individuals, organizations and agencies.

Although the PHL system alliance may draw together these various laboratories and stakeholders for specific functional roles, it is often difficult in reality to enable these organizations – each with individual missions, directives and funding streams – to work in parallel to plan for existing and shifting public health needs. Most PHL systems currently face challenges such as a **lack of benchmarks** or common set of standards for partner organizations to follow; a **lack of knowledge** and inclusion of key partners during program planning; **misalignment** of the various priorities or initiatives of partner organizations; and **lack of capacity** for program deployment due to complex multi-organizational processes.

The Association of Public Health Laboratories defines the complex PHL system as ***“An alliance of laboratories and other partners within a state that supports the ten essential public health services under the aegis of the state public health laboratory. The system members and stakeholders operate in an interconnected and interdependent way to facilitate the exchange of information, optimize laboratory services, and help control and prevent disease and public health threats.”***

There are currently many efforts targeted toward the improvement of Public Health practice including the development of best practices, performance standards, and accreditation procedures. The Association of Public Health Laboratories (APHL), in conjunction with the Centers for Disease Control and Prevention (CDC), has created several resources to help laboratories and PHL systems achieve higher levels of efficiency, customer service and partner collaboration. One vital APHL resource is the Laboratory System Improvement Program (L-SIP) which is a self-evaluation tool that helps ensure PHL systems are aligned with the ten essential services of public health. The L-SIP process encourages State Public Health Laboratories to work with partners and stakeholders to assess and measure how well they are collectively meeting the needs of their customer base and, subsequently, identify areas for focused improvement.

The L-SIP process clearly enables the PHL system to identify what gaps or needs should be addressed. However, developing effective system performance improvement plans requires an integrated approach and understanding of not just *what* must be achieved, but *how* this must be deployed to assure: 1) priorities and resources meet short, intermediate and long-term outcomes; 2) appropriate measures of performance are identified; 3) organizational systems are aligned and integrated to the PHL system; 4) partner, stakeholder and customer feedback is obtained; and 5) action plans deployed ensure a temporal sequence.

A potential solution to this problem can be found in organizational management tools such as the Malcolm Baldrige Criteria for Performance Excellence, a nationally recognized performance program which defines methods to align, integrate and support key organizational systems. The Baldrige Criteria for Performance Excellence has been successfully applied to a variety of organizational systems including health care, education, service, non-profit/government, manufacturing and small business. This non-prescriptive tool outlines a measurable evaluation of an *organizational system* through seven elements: 1) Leadership; 2) Strategic Planning; 3) Customer; 4) Measurement, Analysis and Knowledge Management; 5) Workforce; 6) Operations; and 7) Results.

The State Hygienic Laboratory at the University of Iowa (SHL) in partnership with the Iowa Quality Center (IQC) has developed a Systems Logic Model which merges these two nationally recognized program tools into a single framework for PHL Systems. This innovative approach provides organizations with a single, integrated model that will better inform decisions impacting resources, processes and partners, and action plans with goals and measures leading to continuous PHL system performance improvements. Merging Baldrige with the L-SIP Performance Measurement Tool provides any PHL system partner with 1) model standards and national criteria to assure alignment within the 11 Core Laboratory Functions/10 Essential Public Health Services and 2) an adaptable, non-prescriptive performance program to manage systems, improve value to stakeholders/customers/system partners, achieve sustainability, and build continuous improvements. This model provides a universal approach to quantitatively determine performance improvement priorities, define goals within PHL system standards, and develop action plans to effectively and efficiently achieve the desired results.

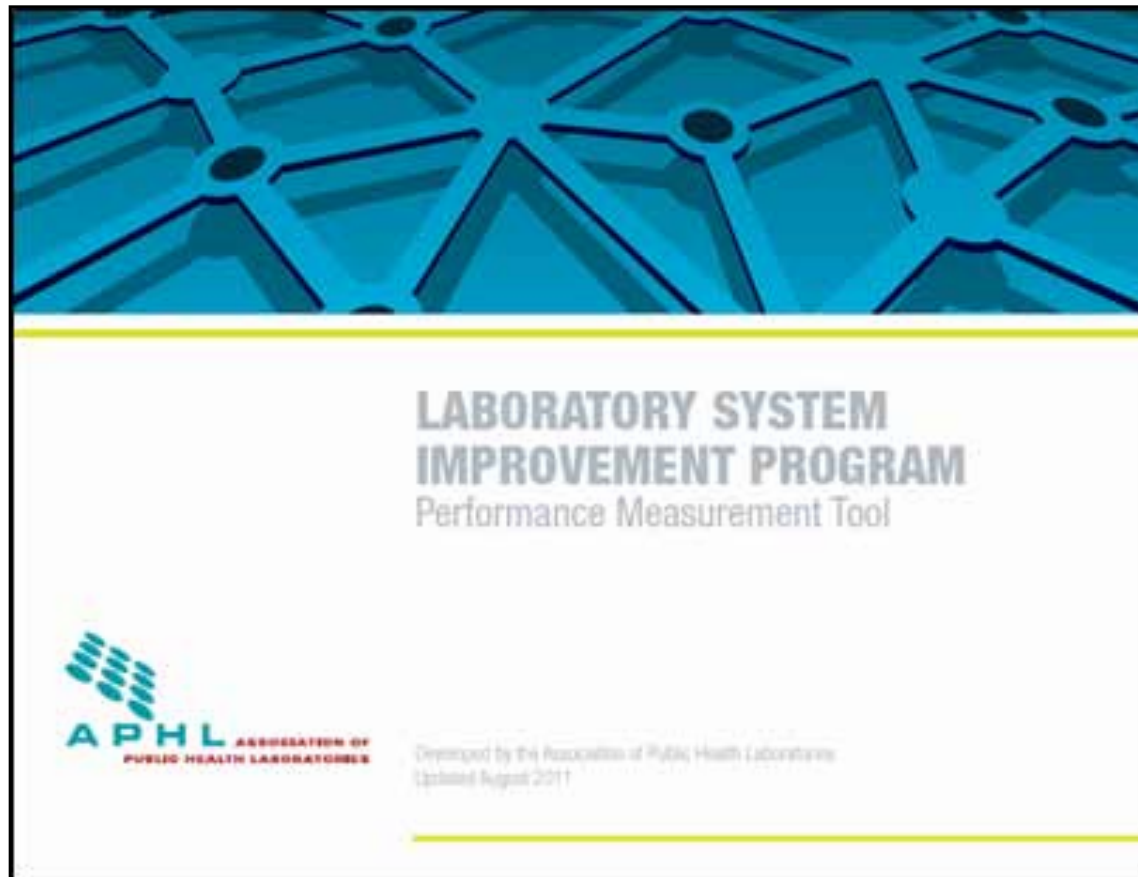
Through a 2012 APHL Innovations in Public Health Laboratory Practice grant, the SHL, the Iowa Department of Public Health (IDPH) and the IQC have been able to demonstrate the validity of the Systems Logic Model and develop this User Guide to share the model with additional PHL systems. The goal is that the model and this guide can be used by any PH laboratory or PHL system for daily operational decisions, strategic or program planning and on-going PHL system improvements.

Laboratory System Improvement Program (L-SIP) – Performance Measurement Tool

The L-SIP program was first developed in 2004 through a joint effort of APHL and CDC's Division of Laboratory Systems, and is based on the National Public Health Performance Standards Program. The mission of L-SIP is **“to establish a system that measures the performance of state public health systems and**

supports their continuous improvement.”

L-SIP provides a set of laboratory performance standards that aligns PHL system functions with the Ten Essential Services of Public Health and the Eleven Core Functions and Capabilities of State Public Health Laboratories. These standards are focused on the PHL system level, rather than an individual organization level; describe an optimal level of performance,



Source: Association of Public Health Laboratories (<http://www.aphl.org/aphlprograms/lss/performance/pages/default.aspx>)

rather than a minimum level of service; and support a process for improvement, rather than a one-time evaluation. The L-SIP process encourages PHL system partners to collaboratively:

- Assess system performance
- Plan for system improvements
- Implement improvement strategies
- Periodically evaluate and re-assess performance

The L-SIP toolkit provides assessment instruments, such as the Performance Measurement Tool and the User's Guide, to identify PHL system gaps and needs. L-SIP encourages implementation of improvements via a “Plan-Do-Check-Act” cycle and a five-step approach of: participation, prioritization, root-cause determination, development and progress monitoring/reporting. Since piloting the L-SIP tool in 2007, 28 states and one local site have completed the assessment process.

The L-SIP Performance Measurement Tool (**Figure 1**) aligns each of the Ten Essential Services of Public Health with one or more laboratory-specific *Model Standards*, which outline aspects of high performance for state PHL systems. In turn, each Model Standard is further broken down into one or more specific components called *Key Ideas*.

L-SIP Essential Services

Essential Services	PHL Model Standards	Key Ideas
ESSENTIAL SERVICE #1: MONITOR HEALTH STATUS TO IDENTIFY COMMUNITY HEALTH PROBLEMS	1.1: Monitoring of Community Health Status	1.1.1- The SPH Laboratory System identifies infectious disease and environmental sentinel events, monitors trends, and participates in state and federal surveillance systems.
		1.1.2- The SPH Laboratory System monitors congenital, inherited, and metabolic diseases of newborns and participates in state and federal surveillance systems.
		1.1.3- The SPH Laboratory System supports the monitoring of chronic disease trends by participating in state and federal surveillance systems.
	1.2: Surveillance Information Systems	1.2.1- The SPH Laboratory System has a secure, accountable and integrated information management system for data storage, analysis, retrieval, reporting and exchange. 1.2.2- The SPH Laboratory System partners collaborate to strengthen electronic surveillance systems.
ESSENTIAL SERVICE #2: DIAGNOSE AND INVESTIGATE HEALTH PROBLEMS AND HEALTH HAZARDS IN THE COMMUNITY	2.1: Appropriate and effective high quality testing	2.1.1- The SPH Laboratory System assures the effective provision of services at the highest level of quality to assist in the detection, diagnosis, and investigation of all significant health problems and hazards.
		2.1.2- The SPH Laboratory System has the necessary system capacity, authority, and preparations in place to rapidly respond to emergencies that affect the public's health.
ESSENTIAL SERVICE #3: INFORM, EDUCATE, AND EMPOWER PEOPLE ABOUT HEALTH ISSUES	3.1: Outreach to Partners	3.1.1- The SPH Laboratory System creates and delivers consistent information to community partners about relevant health issues associated with laboratory services. 3.1.2- The SPH Laboratory System creates and provides education opportunities to health and non-health community partners.
	3.2: Empower Partners	3.2.1- Relationship-building opportunities are employed to empower community partners.
ESSENTIAL SERVICE #4: MOBILIZE COMMUNITY Partnerships TO IDENTIFY AND SOLVE HEALTH	4.1: Partnership Development	4.1.1- Partners in the SPH Laboratory System develop and maintain relationships to formalize and sustain an effective system.
PROBLEMS	4.2: Communication	4.2.1- SPH Laboratory System members communicate effectively in regular, timely, and effective ways to support collaboration.
	4.3: Resources	4.3.1- The SPH Laboratory System works together to share existing resources and to identify new resources to assist in identifying and solving health issues.
ESSENTIAL SERVICE #5: DEVELOP POLICIES AND PLANS THAT SUPPORT INDIVIDUAL AND COMMUNITY HEALTH EFFORTS	5.1: Partnerships in Public Health Planning	5.1.1- The SPH Laboratory System obtains input from diverse partners and constituencies to develop new policies and plans and modify existing ones.
	5.2: Role in Laboratory-Related Policy Making	5.2.1- The SPH Laboratory System and partners contribute their expertise and resources using science and data to inform and influence policy.
	5.3: Dissemination and Evaluation	5.3.1- The plans and policies that affect the SPH Laboratory System are routinely evaluated, updated and disseminated.

ESSENTIAL SERVICE #6: ENFORCE LAWS AND REGULATIONS THAT PROTECT HEALTH AND ENSURE SAFETY	6.1: Laws and Regulations	6.1.1- The SPH Laboratory System is actively involved in the review and revision of laws and regulations pertaining to laboratory practice.
		6.1.2- The SPH Laboratory System encourages and promotes compliance by all laboratories in the system with all laws and regulations pertaining to laboratory practice.
	6.2: Enforcement of Laws and Regulations	6.2.1- The SPH Laboratory System has the appropriate resources to provide or support enforcement functions for laws and regulations.
ESSENTIAL SERVICE #7: LINK PEOPLE TO NEEDED PERSONAL HEALTH SERVICES AND ASSURE THE PROVISION OF HEALTHCARE WHEN OTHERWISE UNAVAILABLE	7.1: Provision of Laboratory Services	7.1.1- The SPH Laboratory System identifies laboratory service needs and collaborates to fill gaps.
		7.1.2- The SPH Laboratory System provides timely and easily accessed quality services across the jurisdiction.
ESSENTIAL SERVICE #8: ASSURE A COMPETENT PUBLIC HEALTH AND PERSONAL HEALTHCARE WORKFORCE	8.1: Defined Scope of Work and Practice	8.1.1- All laboratories within the SPH Laboratory System identify position requirements and qualifications; assess competencies; and evaluate performance for all laboratory workforce categories across the entire scope of testing.
	8.2: Recruitment and Retention of Qualified Staff	8.2.1- The SPH Laboratory System maintains an environment to attract and retain highly qualified staff.
	8.3: Assuring a Competent Workforce	8.3.1- The SPH Laboratory System works to assure a competent workforce by encouraging and supporting staff development through training, education, and mentoring.
		8.3.2- The SPH Laboratory System identifies and addresses current and future workforce shortage issues.
ESSENTIAL SERVICE #9: EVALUATE EFFECTIVENESS, ACCESSIBILITY AND QUALITY OF PERSONAL AND POPULATION- BASED SERVICES.	9.1: System Mission and Purpose	9.1.1- The SPH Laboratory System range of services, as defined by its mission and purpose, is evaluated on a regular basis.
	9.2: System Effectiveness, Accessibility and Quality	9.2.1- The effectiveness of the personal and population based laboratory services provided throughout the state is regularly evaluated.
		9.2.2- The availability of personal and population-based laboratory services throughout the state is regularly evaluated.
		9.2.3- The quality of personal and population-based laboratory services provided throughout the state is regularly evaluated.
ESSENTIAL SERVICE #10: RESEARCH FOR INSIGHTS AND INNOVATIVE SOLUTIONS TO HEALTH PROBLEMS	10.1: Planning and Financing Research Activities	10.1.1- The SPH Laboratory System has adequate capacity to plan research and innovation activities.
	10.2: Implementation, Evaluation, and Dissemination	10.2.1- The SPH Laboratory System promotes research and innovative solutions.

Figure 1: L-SIP Performance Measurement Tool

The L-SIP Assessment is conducted by bringing together PHL system stakeholders and partners, walking through each Model Standard and Key Idea, and asking the group to provide a consensus score on how the overall PHL system is currently addressing each Key Idea. Participants are asked to use the following scoring criteria for each Key Idea:

No Activity	0% or absolutely no activity.
Minimal Activity	Greater than zero, but no more than 25% of the activity described within the question is met within the state public health laboratory system
Moderate Activity	Greater than 25%, but no more than 50% of the activity described within the question is met within the state public health laboratory system
Significant Activity	Greater than 50%, but no more than 75% of the activity described within the question is met within the state public health laboratory system
Optimal Activity	Greater than 75% of the activity described within the question is met within the state public health laboratory system

Figure 2: L-SIP Assessment Scoring Criteria

Therefore, following the L-SIP Assessment, any Key Ideas / Model Standards / Essential Services that are scored with No Activity or Minimal Activity within the PHL system can provide the foundation to formulate improvement goals and actions. **For PHL systems, the L-SIP Assessment provides an indicator for WHAT gaps or needs exist in the current system.**

Malcolm Baldrige Criteria for Performance Excellence

The Baldrige Performance Excellence Program is a U.S. based public-private partnership supporting performance excellence in business and non-profit sectors. The program was created by Congress in 1987 and first implemented by the Department of Commerce to recognize leading U.S. businesses in the field of organizational management and quality. The Mission of the Baldrige Program is “**to improve the competitiveness and performance of U.S. organizations for the benefit of all U.S. residents.**”

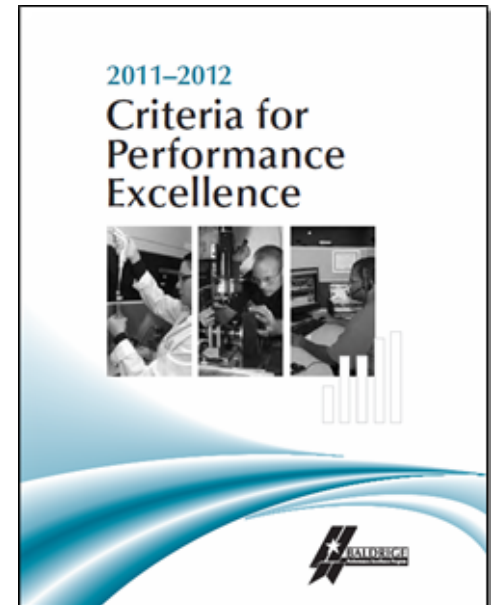
The Baldrige Program has been organized through the Department of Commerce’s National Institute of Standards and Technology (NIST) and various private individuals and organizations focused on quality standards, such as industry leaders and the American Society for Quality (ASQ). Major private corporations, including Motorola, Boeing, Xerox, and AT&T, have adopted the Baldrige Program, as well as over 49 state-based organizations. It exists as a customer-focused federal change agent that:

- develops and disseminates evaluation criteria
- manages the Malcolm Baldrige National Quality Award
- promotes performance excellence
- provides global leadership in the learning and sharing of successful strategies and performance practices, principles, and methodologies

The centerpiece of the Baldrige Program is the annual Malcolm Baldrige National Quality Awards which represent the highest level of national recognition for performance excellence in U.S. organizations. Applicant organizations are asked to thoroughly examine their management structure and practices in order to create a dossier of materials and responses using Baldrige’s *Criteria for Performance Excellence* guidelines. Three versions of these criteria have been developed in order to evaluate various organizational sectors: business/nonprofit (See Appendix C: Further Reading), education and healthcare. The Criteria for Performance Excellence guidelines serve as an integrated framework for managing an organization. The criteria are self-reflecting questions focusing on critical aspects of management that contribute to performance excellence including 1) Leadership; 2) Strategic Planning; 3) Customer Focus; 4) Measurement, Analysis and Knowledge Management; 5) Workforce Focus; 6) Operations Focus and 7) Results.

The Baldrige Award applications are reviewed by individual examiners who have received training in organizational management systems. Across the seven critical aspects, an organization may receive a maximum total of 1000 points from the examiner.

For each critical aspect, applications are specifically evaluated by assessing the level to which organizations possess an accepted **Approach (A)** or method; have **Deployment (D)** of that approach throughout their system; incorporate **Learning (L)** to be able to adapt approaches to better fit their structure and encourage **Integration**



Source: Baldrige Performance Excellence Program (<http://www.nist.gov/baldrige/publications/criteria.cfm>)

What Is Performance Excellence?

According to the Baldrige Program, “Performance Excellence” refers to an integrated approach to organizational performance management that results in:

- *Delivery of ever-improving value to customers and stakeholders, contributing to organizational sustainability*
- *Improvement of overall organizational effectiveness and capabilities*
- *Organizational and personal learning*

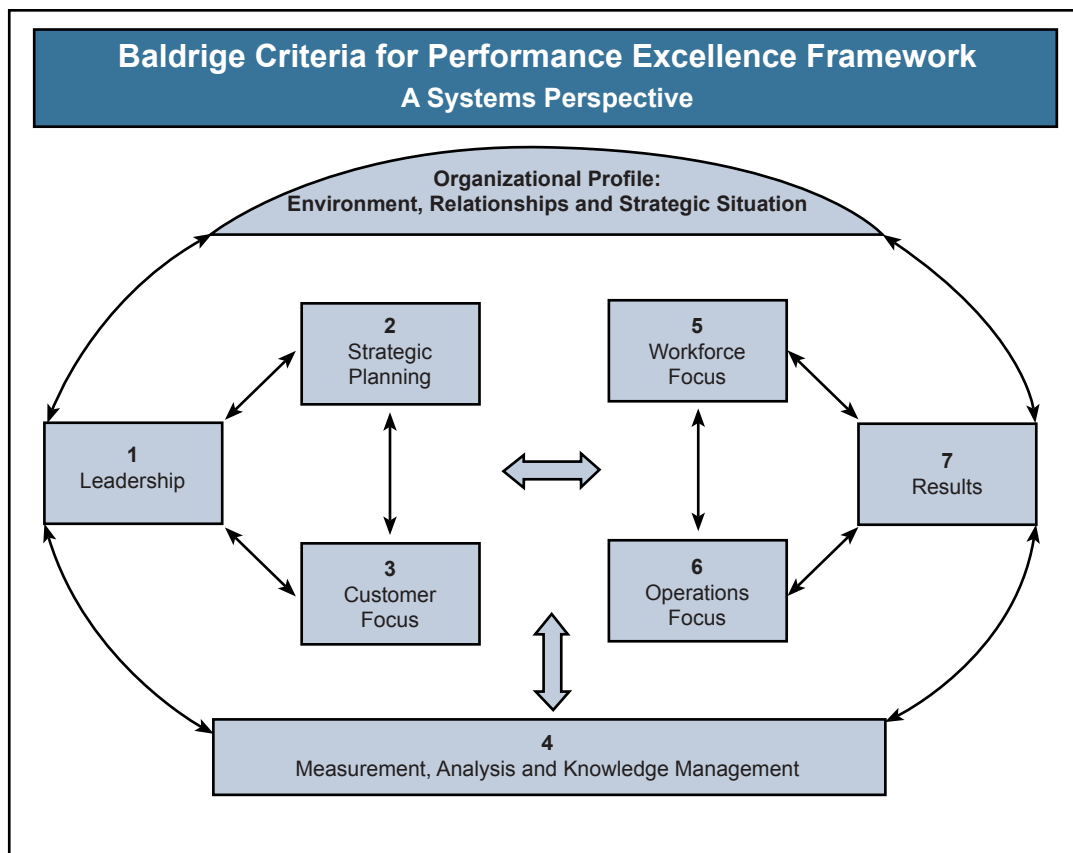


Figure 3: Baldrige System Elements

(I) of the approach across the overall organizational structure. Organizations with a higher level of systematic implementation of quality standards are awarded a higher percentage of the maximum score for the performance excellence criteria. Written evaluations from examiners are returned to each organization so that they may review any areas with low scores in order to determine exactly how to best develop and implement (A, D, L or I) improvement

efforts and action items. In this way, Baldrige provides an extremely specific and quantitative indication of where organizations can best utilize resources in order to create the most optimal outcome of change and improvement within their system.

An appealing aspect of the Baldrige Criteria for Performance Excellence is that organizations may decide to submit a formal application for the annual Baldrige Award, or they may perform an internal assessment to evaluate and improve their current business practices. Answering the Baldrige Criteria can help organizations assess their internal improvement efforts, diagnose the overall performance management system and identify strengths and opportunities for improvement. **Utilizing the Baldrige Criteria for Performance Excellence provides organizations with a non-prescriptive method for HOW to evaluate system elements for improvement.**

Incorporating L-SIP and Baldrige to Create a Public Health Practice Model

The State Hygienic Laboratory at the University of Iowa (SHL) and Iowa's State PHL system partners first piloted the APHL L-SIP process in 2007. Despite the success of the L-SIP process in providing an accurate assessment of gaps in the Iowa PHL system services, it did not provide a framework for directly translating identified PHL system gaps into workable solutions with a strategic, program, or enterprise focus. By not incorporating direct assignment of outcomes, action plans and results to PHL system partners at the time of the L-SIP Assessment, much of the potential for developing solutions and addressing gaps within the PHL system were complex and not sustainable. Individuals within the SHL identified the potential to enhance the effectiveness of the L-SIP

process by also incorporating a nationally recognized method for organizational evaluation and performance improvement.

By incorporating L-SIP and Baldrige using a logic model sequence, a universal approach becomes available to determine performance improvement priorities for public health practice. (Figure 4)

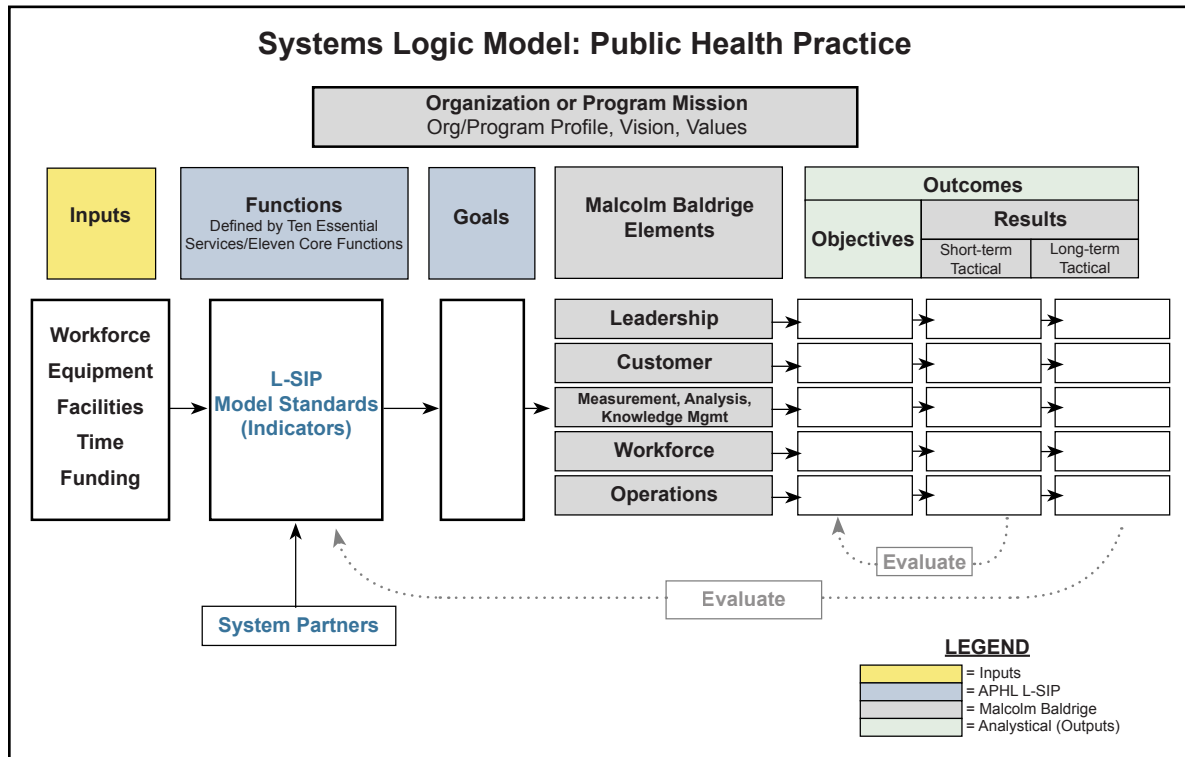


Figure 4: Incorporation of L-SIP and Baldrige to Create Public Health Practice Model

such agencies as CDC, the logic model is a standard mechanism used for organization and program planning. The logic model provides a visual method to analytically define how specific actions, interventions, or indicators will produce specific results.

Walking through the Public Health Practice Model:

- **STEP ONE:** Determine the scope of the enterprise to be improved and identify key PHL Stakeholders to invite in the evaluation process. Complete the Baldrige Organizational/Program/Enterprise Profile.
- **STEP TWO:** Perform the L-SIP Assessment as a measure of how well the enterprise is currently functioning and to establish consensus among stakeholders.
- **STEP THREE:** Identify critical and urgent performance gaps from the L-SIP Assessment consensus and reframe into Goals/Objectives for improvement.
- **STEP FOUR:** For each Goal/Objective, perform the Baldrige Criteria for Performance Excellence evaluation.
- **STEP FIVE:** For each Goal/Objective, develop specific intervention plans (Strategies/Sub-strategies, Tactics, Performance Metrics/Targets, Owners and Timelines) based on the lowest Baldrige scores.

STEP ONE: Determine the scope of the enterprise to be improved and identify key stakeholders to invite to the evaluation process. Complete the Baldrige Organizational/Program/Enterprise Profile. (*See Appendix A: Planning Tools*)

BENEFITS:

- Clearly defines the enterprise and the focus for improvements that support the PHL system.
- Provides snapshot of the relationships and environment. Establishes common framework of understanding for Mission, Vision and Values.
- Defines the operating environment, key stakeholders, competitive environment, strategic context, and existing resources (workforce, equipment, facilities, time and funding).

SUGGESTIONS:

- Avoid complex system changes—focus enterprise improvements through a partial assessment: single program operated within the PHL system,
- PHL services within a distinct geographical region, or internal assessment of individual PHL system partner organizations.
- Create a planning team with key stakeholders to lead and sponsor the initiative.

Those leading the initiative must have a very clear understanding of the scope, framework, and limits of the organization, program or enterprise being evaluated. Planning meetings for the assessment process should clearly define the enterprise, overarching objectives and focus for improvements. The larger the scope of the assessment, the more complex it will likely be and possibly involve the number of stakeholders needed to participate and the level of inter-operability to assure process improvements within the entire system. Limiting the scope to a single program focus (such as Newborn Screening) and completing a L-SIP partial assessment can lead to targeted action plans that support the larger PHL system, yet centralize resources to directly improve processes that supports the program.

Selection of the focus will have a direct impact on the key stakeholders who should be invited to participate in the assessment, including specific partner organizations, functional work groups/departments and program customers who are integral to the system improvement. Important considerations:

- extending invitations to key stakeholders,
- identifying specific individuals to participate, and
- identifying mutual benefits.

A good approach for encouraging participation in an assessment is to find a few key partners to form a planning team and sponsor the event. Collaboration of the public health laboratory, State Department of Public Health, local public health organization and a state chapter of a professional organization can provide validity to the assessment process and incentive for additional organizations to participate. APHL provides several resources and materials to help prepare for an L-SIP Assessment, and the “L-SIP Flyer” is a document that can be shared with organizations with the assessment invitation. (*See Appendix C: Further Reading*) This document includes a compelling list of benefits for state and local public health laboratories associated with this assessment process including:

- “provides support for the accreditation of state and local public health departments by the Public Health Accreditation Board;

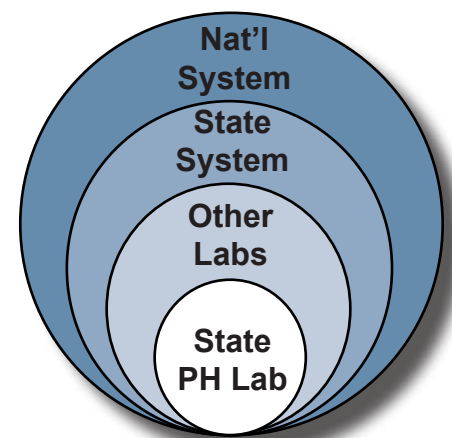


Figure 5: The PHL System

- provides a benchmark for public health laboratory system practice improvements, by setting a gold standard to which public health systems can aspire;
- improves communication and collaboration by bringing partners (e.g., public health, environmental, and other laboratories, first responders and key constituencies) together;
- educates stakeholders about the public health laboratory system and the interconnected activities that lead to collaborative system solutions;
- strengthens the diverse network of partners throughout the federal, state and local systems, leading to cohesive partnerships and better coordination of activities and resources; and
- identifies strengths and gaps that can be addressed in laboratory system quality improvement efforts.”

Once the scope and stakeholders have been identified, the Baldrige Organizational/Program Profile should be completed (**Figure 7**). It provides an overview of the organization, program or enterprise and addresses the operating environment, key relationships, competitive environment and strategic context and the approach to performance improvement. The Profile also provides critical insight into key internal and external factors that shape the operating environment and help the enterprise better understand the context in which it operates. This is also an important starting point, because if some of these questions are difficult to answer or define, it may be an early indicator of gaps in the organizational structure of the system. Completing the Baldrige Organizational/Program/Enterprise Profile should include a collaborative effort (or at least a group review) of several individuals within the organization or program representing various departments or sections to ensure that an accurate depiction is being captured.

State PH Lab	Other Laboratories
Divisions/Key Dept	Services
Infect Diseases	Clinical
Environmental	Environmental
NBS	Agriculture
Support, ITS, Human Resources, PIO	Veterinary
State and National PHL System	
System Partners	
SPH Officials	Local PH Admin
PH Dept	Water/Air Quality
EM Partners	Researchers
Emerg Planners	Lab Staff Training Prog
Public Safety	Regulators/Accred
Legis/Elected Officials	Health Insurers
Local Epi	Prof Org/Associations
Hospital Admin	Medical Assoc
Healthcare Orgs	Hospital Assoc
Local PH Officials	Pharmacists
Policy Makers	Business Comm
Clinical Labs	Manufacturers
Agriculture	Public Information Officers
Veterinarians	Community Leaders
Chronic Disease Providers	Media
Fed Partners	General Public
	Schools
	School Career Counselors
	HR Dept

Figure 6: PHL System Partners

Organizational/Program/Enterprise Description			Responses
Environment	1.a.	What are your organization's/program's main products and services? What are those most dependent on your response time?	
	1.b.	What are the delivery mechanisms used to provide your products and services to your customers (users and potential users)?	
	2	What is your organizational/program culture? What are your stated purpose, vision, mission and values ?	
	3	What is your workforce profile? What are your workforce segments? What are their key requirements and expectations? What are their education levels? What are your organization's/program's workforce and job diversity, organized bargaining units, key benefits, and special health and safety requirements?	

Figure 7: The Organization/Program/Enterprise Profile

STEP TWO: Perform the L-SIP Assessment as a measure of how well the enterprise is currently functioning. (*See Appendix A: Planning Tools*)

BENEFITS:

- Measures the level of knowledge that stakeholders have of the enterprise and develops consensus on level of performance.
- Identifies gaps and key areas of improvement based on national model standards.

SUGGESTIONS:

- Collect individual L-SIP assessments from each stakeholder. Limit initial assessment to less than 30 minutes, avoiding detailed interpretation or how to operationalize the Key Ideas.
- Use survey software to administer the individual assessments, summarize data, and identify key themes (e.g., Survey Monkey, Form Site, Qualtrics, Google).
- Bring stakeholders together to discuss findings and develop consensus on assessment scores, including development of Goal/Objectives and Action Plans.
 - Convene a 1-day retreat off-site.
 - Use a facilitator to provide structure and process, and support group synergy.
 - Set time limits for discussion.

L-SIP ESSENTIAL SERVICES			L-SIP Assessment Score /Level of Activity						Possible next steps, suggested activities, or opportunities for improvement
Essential Services	PHL Model Standards	Key Ideas and Examples	Partial Assessment- Does not apply to this focus	None No Activity 0%	Minimal Activity 1-25%	Moderate Activity 26-50%	Significant Activity 51-75%	Optimal Activity 76-100%	
ESSENTIAL SERVICE #1: MONITOR HEALTH STATUS TO IDENTIFY COMMUNITY HEALTH PROBLEMS	1.1 Monitoring of Community Health Status	1.1.1- The Public Health Laboratory (PHL) System identifies infectious disease and environmental sentinel events, monitors trends, and participates in state and federal surveillance systems.							
		1.1.2- The PHL System monitors congenital, inherited, and metabolic diseases of newborns and participates in state and federal surveillance systems.							
		1.1.3- The PHL System supports the monitoring of chronic disease trends by participating in state and federal surveillance systems.							
	1.2 Surveillance Information Systems	1.2.1- The PHL System has a secure, accountable and integrated information management system for data storage, analysis, retrieval, reporting and exchange.							
		1.2.2- The PHL System partners collaborate to strengthen electronic surveillance systems.							

Figure 8: L-SIP Assessment Tool

The L-SIP Assessment (**Figure 8**) provides the set of performance standards which enables measurement of the overall function of the PHL system, and can be used for:

- a full assessment of the local, state, or national PHL system;
- partial assessment of individual programs operated within the PHL system;
- partial assessment of PHL services within a distinct geographical area; or
- internal assessment of individual PHL system partner organizations.

The L-SIP Assessment can be performed remotely by stakeholders prior to a face-to-face meeting. Completing individual assessments prior to any stakeholder meetings introduces the national performance standards, establishes a common framework of understanding and targets discussion time focusing on potential solutions to address current needs.

Prior to completing the assessment, it is critical that all invited stakeholders are well informed of the scope and framework of the enterprise to be improved. The assessment can be shared with the group electronically via spreadsheet or by using on-line survey software. Participants are able to submit scoring for each of the L-SIP Key Elements individually, and the planning team can collect individual responses to create a consolidated summary of responses for each Key Element. Participants must be properly introduced to the format, purpose and scope of the overall assessment ahead of time, and they should be directed on how to approach answering the L-SIP Assessment scoring. With diverse perspectives and backgrounds, participants might only be aware of their individual organization's role in supporting PHL system programs or function. When asking for individuals to complete the L-SIP Assessment, it is important to request that individuals score the Key Elements to the best of their knowledge.

There are several other formats for conducting the L-SIP Assessment among stakeholders. APHL provides excellent resources for performing the assessment from the L-SIP toolkit website. (*See Appendix B: Further Reading*)

Assessment data can be summarized graphical to provide easily visualized responses, and tabulated to calculate the average, mean, median, and standard deviation. See **Figure 9** and **Figure 10** for examples.

Initial Analysis (based on >25 STD DEV, <70 UPPER RANGE)

Poorest Performance: Lowest Scoring, Large STD DEV, Low UPPER RANGE

Best Performance: Highest Scoring, Low STD DEV, high UPPER RANGE

L-SIP Model Standard and Key Ideas			MEAN	MEDIAN	STD DEV	68% of numbers fall within range	
ESSENTIAL SERVICE #1: MONITOR	1.1: Monitoring of Community Health Status	1.1.1-The SPH Laboratory System identifies infectious disease and environmental sentinel events, monitors, trends and participates in state and federal surveillance systems.				LOWER RANGE	UPPER RANGE
		70.0	75.0	15.0	55.0	85.0	
		1.1.2-The SPH Laboratory System monitors congenital, inherited and metabolic diseases of newborns and participates in state and federal surveillance systems	90.0	100.0	12.2	77.8	102.2

Figure 9: Example of L-SIP Assessment summary statistics

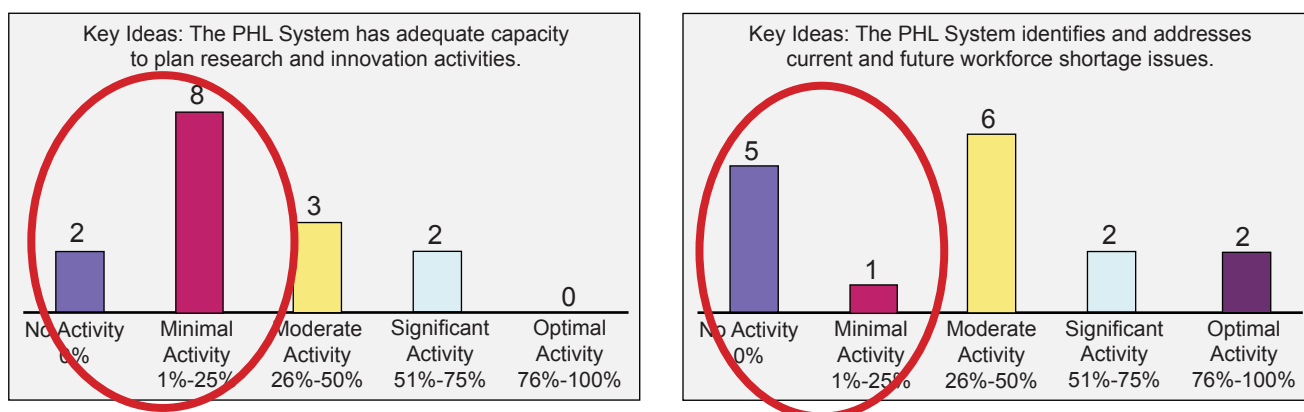


Figure 10: Examples of L-SIP Assessment summary data depicting areas of improvement

STEP THREE: Identify critical and urgent performance gaps from the L-SIP Assessment consensus scores and reframe into Goals/Objectives for improvement. (*See Appendix A: Planning Tools*)

BENEFITS:

- Prioritizes the most urgent and critical needs for improvement among all stakeholders.
- Supports outcomes that are a value-added benefit within the PHL system.

SUGGESTIONS:

- Bring stakeholders together as part of a 1-day retreat (see under KEY SUGGESTIONS, STEP TWO).
- Develop 3-4 Goals/Objectives and determine short and long-term priorities.
- Set Goals/Objectives based on SMART (Specific, Measurable, Attainable, Realistic and Time-targeted).

Those initiating the event should convene stakeholders for a face-to-face meeting. The first step of the meeting should be to orientate participants to the concept of systems, as well as provide an overview of both the L-SIP and Baldrige. Then the meeting is focused on reviewing the scoring summary from the individual assessments and then discussion to develop consensus scores. Understanding that each participant has scored the L-SIP Key Elements based on their own experience and knowledge base, there will need to be discussion among the participants to accept and review the scoring summaries.

Once the stakeholders have agreed upon the L-SIP scores, they can then determine which L-SIP gaps to focus on for improvement measures. By reviewing the entire list of consensus scores, the participant group will be able to identify a list of Key Ideas that appear to be areas where the current PHL system has the most critical and urgent needs to focus improvements. Subsequently, the group can prioritize these areas of sub-optimal performance and attempt to rephrase these gaps into a manageable number of *Objectives/Goals* they wish to achieve to improve the PHL system.

Each goal might be associated with a single Key Idea which scored low or a group of related Key Ideas which all scored low from participant responses. The example shown in **Figure 11** is based on gaps identified in Keys Ideas 3.1 (Outreach to Partners) and 4.1-4.3 (Partnership Development, Communication, and Resources). This single goal will have separate action items to enhance and support partnerships throughout the PHL system.

Each Goal/Objective will be subject to a more in-depth review using the Baldrige Criteria and, based on the Baldrige scoring, will be developed into targeted action plans that include strategies, tactics and performance metrics.

A=Approach	0 to 100%	There is a method used to accomplish process
D=Deployment	0 to 100%	The approach is applied consistently & executed by all work units
L=Learning	0 to 100%	The approach is evaluated & refinements shared
I=Integration	0 to 100%	The approach aligned to organizational needs & harmonized across all processes/units to meet organizational goals
Systematic	Goal=100%	Approaches are well ordered, repeatable, fact-based, with no weaknesses/gaps
LSIP Assessment Gap Being Addressed		
Lack regular and timely partnerships to identify and solve health problems		
Goal/Objective (From LSIP Key Idea for Improvement)		
Develop a systematic partnership		

Figure 11: Example of L-SIP performance gap and related Goal/Objective development

STEP FOUR: Perform Baldrige Criteria for Performance Excellence evaluation. (See Appendix A: Planning Tools)

BENEFITS:

- Evaluate the level of maturity of the enterprise using a systems perspective.
- Develop an understanding of key processes within the enterprise and their inter-relationships.

SUGGESTIONS:

- Bring stakeholders together as part of a 1-day retreat (see under KEY SUGGESTIONS, STEP TWO).
- Evaluate and score each Goal/Objective based on the Baldrige Elements and
 - Each ADLI process evaluation (Approach, Deployment, Learning and Integration) and
 - Overall maturity using ADLI

For each Goal/Objective, perform the Baldrige Criteria for Performance Excellence evaluation according to the Baldrige Elements and key questions within: Leadership; Customer; Measurement, Analysis, and Knowledge Management; Workforce Focus; Operations; and Strategic Planning (**Figure 12**).

Baldrige Criteria and Key Questions	
Leadership	Organizational processes that include: Senior leaders' actions guide/sustain organization. Senior leaders communicate/encourage high performance work Governance system & approach to leadership improve. Ensure legal/ethical behavior, fulfill societal responsibility, support key communities.
Customer	Organizational processes that include: Listening to customers & gain satisfaction/dissatisfaction information. Engage customers to serve their needs & build relationships. Determine product/service offerings & communication mechanisms to support customers. Build customer relationships.
Measurement and Knowledge Management	Organizational processes that include: Measure, analyze, review, improve performance using data/information. Manage information, organizational knowledge, information technology. Ensure quality/availability of needed data, information, software, hardware for workforce, suppliers, partners, collaborators, customers.
Workforce	Organizational processes that include: Manage workforce capability/capacity. Maintains a safe, secure, supportive climate. Engage, compensate, reward workforce to achieve high performance. Assess workforce engagement & use results to achieve higher performance. Workforce & leader development to achieve high performance.
Operations	Organizational processes that include: Design, manage, improve work systems to deliver customer value, prepare for potential emergencies, achieve success/sustainability. Design, manage, improve key work processes to deliver customer value, achieve success/sustainability.
Strategic Planning	Organizational processes that include: How you develop a strategic plan that addresses strategic challenges and advantages related to the mission, vision and values of the organization. It also takes into consideration core competencies and short and long term objectives.

Figure 12: Baldrige Criteria for Performance Excellence -Baldrige Elements and Key Questions

Stakeholders should discuss whether processes relating to the Goal/Objective are currently incorporated within the enterprise being evaluated and to what level of maturity those processes are using **Approach** (A) or method; have **Deployment** (D) of that approach throughout their enterprise; incorporate **Learning** (L) to be able to adapt approaches to better fit their structure; and encourage **Integration** (I) of the approach across the overall enterprise. The Baldrige process adopts a percentage scale from 0% to 100% for each of these four criteria and provides definitions according to the scoring matrix in **Figure 13**.

Factor	0-5%	10-25%	30-45%	50-65%	70-85%	90-100%
Approach	No systematic approach to Item requirements is evident; information is anecdotal.	The beginning of a systematic approach to the basic requirements of the Item is evident.	An effective, systematic approach, responsive to the basic requirements of the Item, is evident.	An effective, systematic approach, responsive to the overall requirements of the Item, is evident.	An effective, systematic approach, responsive to the multiple requirements of the Item, is evident.	An effective, systematic approach, fully responsive to the multiple requirements of the Item, is evident.
Deployment	Little or no deployment of any systematic approach is evident.	The approach is in the early stages of deployment in most areas or work units, inhibiting progress in achieving the basic requirements of the Item.	The approach is deployed, although some areas or work units are in early stages of deployment.	The approach is well deployed, although deployment may vary in some areas or work units.	The approach is well deployed, with no significant gaps.	The approach is fully deployed without significant weaknesses or gaps in any areas or work units.
Learning	An improvement orientation is not evident; improvement is achieved through reacting to problems.	Early stages of a transition from reacting to problems to a general improvement orientation are evident.	The beginning of a systematic approach to evaluation and improvement of key processes is evident.	A fact-based, systematic evaluation and improvement process and some organizational learning, including innovation, are in place for improving the efficiency and effectiveness of key processes.	Fact-based, systematic evaluation and improvement and organizational learning, including innovation, are key management tools; there is clear evidence of refinement as a result of organizational-level analysis and sharing.	Fact-based, systematic evaluation and improvement and organizational learning through innovation are key organization-wide tools; refinement and innovation, backed by analysis and sharing, are evident throughout the organization.
Integration	No organizational alignment is evident; individual areas or work units operate independently.	The approach is aligned with other areas or work units largely through joint problem solving.	The approach is in the early stages of alignment with basic organizational needs identified in response to the Organizational Profile and other Process Items.	The approach is aligned with organizational needs identified in response to the Organizational Profile and other Process Items.	The approach is integrated with organizational needs identified in response to the Organizational Profile and other Process Items.	The approach is well integrated with organizational needs identified in response to the Organizational Profile and other Process Items.

Figure 13: ADLI Process Evaluation Based on Level of Maturity

This evaluation enables the participants to critically examine *HOW* to best achieve each goal because it quantifies how well each Baldrige Element currently addresses the overall concept of the goal. Baldrige Elements which exhibit the lowest scores for that goal concept should be where specific improvement action plans are focused.

Figure 14 depicts the evaluation and scoring based on the Goal/Objective, “Develop a systematic partnership”. For each Goal/Objective, the participants discuss and determine an overall consensus composite score for ADLI (**Figure 14**) and each Baldrige Element. As this concept of was scored, the stakeholders identified Leadership, Customer, and Strategic Planning as the areas with the least maturity and thus lowest scores. This can be interpreted that the enterprise being evaluated and the Goal/Objective to be achieved (as part of the PHL system) does not currently possess well developed processes for improving support to key communities, customer engagement including key communities, and strategic planning for future needs. Although there is some level of development in Approach for many of the Baldrige Elements, the enterprise is still in the early stages for Deployment, Learning, and Integration, indicating that the processes are not yet systematic.

A=Approach	0 to 100%	There is a method used to accomplish process					
D=Deployment	0 to 100%	The approach is applied consistently & executed by all work units					
L=Learning	0 to 100%	The approach is evaluated & refinements shared					
I=Integration	0 to 100%	The approach aligned to organizational needs & harmonized across all processes/units to meet organizational goals					
Systematic	Goal=100%	Approaches are well ordered, repeatable, fact-based, with no weaknesses/gaps					
LSIP Assessment Gap Being Addressed							
Lack regular and timely partnerships to identify and solve health problems							
Goal/Objective (From LSIP Key Idea for Improvement							
Develop a systematic partnership							
Baldrige Criteria and Key Questions		A	D	L	I	Points	Sub Total
Leadership	Organizational processes that include: Senior leaders' actions guide/ sustain organization. Senior leaders communicate/encourage high performance work Governance system & approach to leadership improve. Ensure legal/ethical behavior, fulfill societal responsibility, support key communities.	50%	10%	10%	20%	100	20
Customer	Organizational processes that include: Listening to customers & gain satisfaction/dissatisfaction information. Engage customers to serve their needs & build relationships. Determine product/service offerings & communication mechanisms to support customers. Build customer relationships.	40%	15%	15%	15%	100	25
Measurement and Knowledge Management	Organizational processes that include: Measure, analyze, review, improve performance using data/information. Manage information, organizational knowledge, information technology. Ensure quality/availability of needed data, information, software, hardware for workforce, suppliers, partners, collaborators, customers.	30%	40%	10%	15%	100	30
Workforce	Organizational processes that include: Manage workforce capability/ capacity. Maintains a safe, secure, supportive climate. Engage, compensate, reward workforce to achieve high performance. Assess workforce engagement & use results to achieve higher performance. Workforce & leader development to achieve high performance.	65%	50%	15%	15%	100	45
Operations	Organizational processes that include: Design, manage, improve work systems to deliver customer value, prepare for potential emergencies, achieve success/sustainability. Design, manage, improve key work processes to deliver customer value, achieve success/sustainability.	60%	20%	20%	15%	100	30
Strategic Planning	Organizational processes that include: How you develop a strategic plan that addresses strategic challenges and advantages related to the mission, vision and values of the organization. It also takes into consideration core competencies and short and long term objectives.	15%	10%	10%	15%	100	15

Figure 14: Example of Goal/Objective Evaluation using the Baldrige Criteria and ADLI

STEP FIVE: For each Goal/Objective, develop specific intervention plans (Strategies/Sub-strategies, Tactics, Performance Metrics/Targets, Owners, and Timelines) based on the lowest Baldrige scores. (*See Appendix A: Planning Tools*)

BENEFITS:

- Defines the direction for improvement and commitment of resources.
- Details projects and tasks to achieve the Goal/Objective.
- Identifies Performance Metrics/Targets to assess the level of success.

SUGGESTIONS:

- Bring stakeholders together as part of a 1-day retreat (see under KEY SUGGESTIONS, STEP TWO).
- Refine each Goal/Objective to ensure adequate level of detail.
- Use ideas for improvement collected during individual L-SIP assessments to help formulate Strategies and Tactics.
- Break out into focus groups to develop detailed plans for each Strategy.

Each Goal/Objective will need to be supported by stakeholders through specific actions, projects and activities developed as part of the interventional plan (action plan). These plans provide the road map by assigning 1) a specific person to be responsible for overseeing implementation, 2) a specific timeline for achieving milestones, and 3) specific measurable parameters so that progress can be measured as Tactics and Strategies are achieved or implemented. These aspects of planning are critical for assuring alignment of stakeholder tasks and commitment of resources.

Specific Strategies can be identified based on the lowest Baldrige scores. For example, **Figure 15** demonstrates two Baldrige Elements, Leadership and Customer, to target for specific Strategy development and **Figure 16** details the plan hierarchy, including individual names, specific parameters to track, and specific start and end dates for accomplishing tasks. Strategies support a specific Goal/Objective and establish the framework for Sub-strategies and Tactics. These Strategies are a product of open discussion and brainstorming from the stakeholders on specific needs within ADLI.

A=Approach	0 to 100%	There is a method used to accomplish process					
D=Deployment	0 to 100%	The approach is applied consistently & executed by all work units					
L=Learning	0 to 100%	The approach is evaluated & refinements shared					
I=Integration	0 to 100%	The approach aligned to organizational needs & harmonized across all processes/units to meet organizational goals					
Systematic	Goal=100%	Approaches are well ordered, repeatable, fact-based, with no weaknesses/gaps					
LSIP Assessment Gap Being Addressed							
Lack regular and timely partnerships to identify and solve health problems							
Goal/Objective (From LSIP Key Idea for Improvement							
Develop a systematic partnership							
Baldrige Criteria and Key Questions		A	D	L	I	Points	Sub Total
Leadership	Organizational processes that include: Senior leaders' actions guide/ sustain organization. Senior leaders communicate/encourage high performance work Governance system & approach to leadership improve. Ensure legal/ethical behavior, fulfill societal responsibility, support key communities.	50%	10%	10%	20%	100	20
Customer	Organizational processes that include: Listening to customers & gain satisfaction/dissatisfaction information. Engage customers to serve their needs & build relationships. Determine product/service offerings & communication mechanisms to support customers. Build customer relationships.	40%	15%	15%	15%	100	25
Measurement and Knowledge Management	Organizational processes that include: Measure, analyze, review, improve performance using data/information. Manage information, organizational knowledge, information technology. Ensure quality/availability of needed data, information, software, hardware for workforce, suppliers, partners, collaborators, customers.	30%	40%	10%	15%	100	30
Workforce	Organizational processes that include: Manage workforce capability/ capacity. Maintains a safe, secure, supportive climate. Engage, compensate, reward workforce to achieve high performance. Assess workforce engagement & use results to achieve higher performance. Workforce & leader development to achieve high performance.	65%	50%	15%	15%	100	45
Operations	Organizational processes that include: Design, manage, improve work systems to deliver customer value, prepare for potential emergencies, achieve success/sustainability. Design, manage, improve key work processes to deliver customer value, achieve success/sustainability.	60%	20%	20%	15%	100	30
Strategic Planning	Organizational processes that include: How you develop a strategic plan that addresses strategic challenges and advantages related to the mission, vision and values of the organization. It also takes into consideration core competencies and short and long term objectives.	15%	10%	10%	15%	100	15

Figure 15: Example of focus area to target strategies based on the Baldrige Criteria and ADLI

Goal/Objective	#	Strategy (Owner)	Performance (Targets)
Build a sustainable high performing laboratory aligned with the LSIP Criteria in order to achieve the organizational mission <i>Director</i>	1.1	Build community partnerships to collaborate in a proactive manner to identify and solve health problems <i>Director</i>	Develop 8 new partnership agreements each quarter of FY 2013-2014
	1.2		
Performance Metric	1.3		
	1.4		

Strategy	#	Strategy (Owner)	Performance Metric
Build community partnerships to collaborate in a proactive manner to identify and solve health problems <i>Director</i>	1.1.1	Research communities that have urgent needs for our resources <i>Manager</i>	Complete a formal plan for deployment by September 1, 2012
	1.1.2	Build relationships with community leadership <i>Manager</i>	SHL Leadership meetings and agreement letters signed with partners by 6/30/2013
	1.1.3	Build on going plans to deploy in short term and long term timelines <i>Manager</i>	Strategic plans built to include our partnerships for FY 2013-2014

Figure 16: Example of Strategy/Sub-strategy, Tactics, and Performance Metrics/Targets

Developing performance metrics are critical to measuring success at achieving the Goals/Objectives and support improvement within the PHL system. Performance metrics should include ideal target to monitor levels of progress. These improvements should be periodically measured by completing another L-SIP Assessment and consensus of scoring. Both L-SIP and Baldrige emphasize incorporating a regular schedule for review and evaluation in order to identify successes so that they may continue and to identify failures so that they may be adjusted and improved. From the process of creating intervention plans, stakeholders should be able to determine which processes can be incorporated quickly and which processes will take longer to fully launch.

Tactic	Begin	End
1.1.1.1 Identify Criteria for research <i>Department</i>	6/1/2012	6/30/2012
1.1.1.2 Research community needs and names <i>Department</i>	6/15/2012	7/15/2012
1.1.1.3 Collect baseline data to support improvement <i>Department</i>	7/15/2012	8/15/2012
1.1.1.4 Formalize plan for deployment <i>Department</i>	8/15/2012	9/1/2012

Where processes are being implemented that collect data, effort should be made to collect a “baseline” measurement before the process or change is fully implemented. This way, as process data changes following deployment, there will have a point of comparison to determine if the intervention is having a positive or negative effect on achieving the Strategic Goal/Objective.

Developing the plan should involve all stakeholders, although it is recommended to break out into focus groups to develop detailed actions and Owners once the Strategies have been identified. Stakeholders will need to deploy these plans within their respective organization or program area, and ensure that the appropriate subject matter experts participate in daily projects and tasks. Mid-level managers should delegate specific tasks to direct level managers to help formulate workable solutions that will not interfere with the current workload and expectations of the staff. Ultimately, senior level management is overall responsible for the resource commitment and implementation of these plans and should regular discuss and monitor progress. The planning team or initiators of the evaluation process will need to establish *how* this periodic review process will be implemented and include all stakeholders. A timeline should be created for the frequency of review, and a plan for what individuals should be involved in this review process. For some programs or services, it might be logical for a single organization to perform the periodic review; however, for other programs, it might be advisable to have a multidisciplinary team (such as the one brought together for the initial assessment) to perform subsequent reviews. Stakeholders who have been through the process and understand the mechanisms of utilizing the PHP Model should participate in future reviews as they are the change agent leaders to promote PHL system improvement plans. By maintaining this knowledge expertise, the plan can be sustained through continuity of operations, and quality improvement within the PHL system can translate into operational changes within respective organizations and programs.

Increasing Knowledge of System among Partners

APHL accurately identifies that a specific benefit of performing the L-SIP Assessment is that the diverse PHL system partners and stakeholders obtain a rare opportunity to interact with each other and learn more about each other's roles within the entire system. This collaborative benefit is even more enhanced when implementing the overall PHP Model. Not only do assessment participants have an opportunity to discuss the roles that each organization serves within the PHL system or specific program being addressed, but they actually have an opportunity, through the Baldrige component, to identify gaps within the system and develop strategies and action plans for change within multiple organizations to achieve system wide improvements. This more in-depth level of discussion leads to a deeper level of understanding and, collaboration among the participating organizations.

Expanding Ability of Partners to Strategically Plan Using Common System Goals

An enormous potential for using the PHP Model is sharing a framework for common improvement planning efforts between various PHL system stakeholders, including many different partner laboratories and organizations with different roles within the system. The PHP Model provides an opportunity for these organizations to better understand the L-SIP gold standards for service and the specific Intervention Plans developed to address gaps. This provides an overarching goal to serve public health needs that individual organizations can use for resource allocation, strategic direction and focus, and even seeking collaborations with partner organizations to share resources and knowledge base wherever possible. Participation with the assessment process and using the PHP Model can provide a broad perspective of what the state or nation is trying to achieve, and what part individual organizations can play in accomplishing these tasks while maintaining alignment with other system partners.

Illustrating Flexibility of Model to Fit a Variety of Performance Standards and Guidelines

The PHP Model provides a non-prescriptive, yet methodical way for organizations to accomplish a systematic review of any enterprise and quality improvement process. For our example, it was logical to incorporate APHL's L-SIP standards as the primary measure of Core Functions. However, ***any set of performance standards could be substituted in STEP TWO of this model in order to custom fit this assessment for any organization or enterprise.*** For example, a State Public Health Department might use the National Public Health Performance Standards Program (NPHPSP) criteria as the assessment tool in STEP TWO, and the Baldrige Criteria still employed to target specific Intervention Plans for improvement. This is a very flexible systems logic model for all areas of organizational management and improvement.

Appendix A: Planning Tools

Organization/Program/Enterprise Profile (MS Word, docx)

LSIP Assessment (MS Excel, xlsx)

Baldrige Intervention Plan (MS Excel, xlsx)

Baldrige Intervention Plan Worksheet (Adobe, pdf)

Appendix B: Example of Baldrige Intervention Plan Worksheet

Appendix C: Further Reading

LSIP Performance Assessment Tool and User Guide (Adobe, pdf)

Baldrige Criteria for Performance Excellence for Business / Nonprofits (Adobe, pdf)

Appendix D: Web Site of Interest

State Hygienic Laboratory at The University of Iowa (SHL), <http://www.shl.uiowa.edu/>

Iowa Quality Center (IQC), <http://www.iowaqc.org/content/>

The Association of Public Health Laboratories (APHL), Laboratory System Improvement Program, L-SIP

Performance Measurement Toolkit, <http://www.aphl.org/aphlprograms/lss/performance/Pages/standardstoolkit.aspx>

Malcolm Baldrige Performance Excellence Program, <http://www.nist.gov/baldrige/>

Hoshin Planbase, <http://www.planbase.com/hoshin.html>

Appendix E: References

Association of Public Health Laboratories (2010). Laboratory System Improvement Program. Retrieved December 1, 2011 from <http://www.aphl.org/aphlprograms/lss/performance/Documents/LSIPFlyer.pdf>

Association of Public Health Laboratories, Laboratory System Improvement Program, Promoting System Improvement. Retrieved December 12, 2011 from <http://www.aphl.org/aphlprograms/lss/performance/pages/default.aspx>

Association of Public Health Laboratories (2000). Core Functions and Capabilities of State Public Health Laboratories. Retrieved December 1, 2011 from http://www.aphl.org/AboutAPHL/publications/Documents/COM_2010_CoreFunctionsPHLs.pdf

Association of Public Health Laboratories, Laboratory System Improvement program, L-SIP Toolkit. Retrieved December 12, 2011 from <http://www.aphl.org/aphlprograms/lss/performance/Pages/standardstoolkit.aspx>

Association of Public Health Laboratories (2011). Laboratory System Improvement Program Performance Measurement Tool. Retrieved December 1, 2011 from http://www.aphl.org/AboutAPHL/publications/Documents/LSS_2011_LSIP_PerformanceMeasurementTool.pdf

Association of Public Health Laboratories (2009). APHL: Leading the Labs That Protect the Nation's Health. Retrieved December 6, 2011 from http://www.aphl.org/AboutAPHL/publications/Documents/COM_2009Sept_AboutAPHL.pdf

Baldrige Performance Excellence Program, National Institute of Standards and Technology, US Department of Commerce. Retrieved December 1, 2011 from <http://www.nist.gov/baldrige/>

Baldrige Performance Excellence Program, National Institute of Standards and Technology, US Department of Commerce (2011). 2011-2012 Criteria for Performance Excellence.

University of Idaho Extension, The Logic Model for Program Planning and Evaluation. Retrieved December 12, 2011 from <http://www.uiweb.uidaho.edu/extension/LogicModel.pdf>

Logic Model. Retrieved December 6, 2011 from http://en.wikipedia.org/wiki/Logic_model

Centers for Disease Control and Prevention (CDC) Retrieved on December 12, 2011 from http://www.cdc.gov/dhbsp/programs/nhdsp_program/evaluation_guides/docs/logic_model.pdf

State Hygienic Laboratory Development and editorial team for this publication includes Christopher Atchison (Director), Lorelei Kurimski (Performance Excellence Consultant), Heidi Schleicher (University of Iowa MPH practicum), Gary Nesteby (Executive Director at the Iowa Quality Center), Pat Blake, Ann Armstrong, and Kathy Fait.

The SHL would like to acknowledge the following in support and development of this project: Association of Public Health Laboratories, Innovative Grants program; Iowa Department of Public Health; and Advisory Board members, Martha Gelhaus (Iowa Department of Public Health), Jeannine Moody (Iowa Public Health Association), Gary Nesteby (Iowa Quality Center), Sara Imhoff (Iowa Counties Public Health Association), Varun Reddy, and Heidi Schleicher (University of Iowa MPH practicum).

The University of Iowa is committed to the principle of equality of opportunity for all persons. The purpose of the Affirmative Action Program is to reaffirm and ensure that this principle is applied to the recruitment, appointment and promotion of persons in all employment classifications. The University of Iowa will continue to comply with federal and state regulations and to work cooperatively with governmental and community organizations in ensuring equal employment opportunities and affirmative action.

