THE UNIVERSITY OF IOWA

STATE HYGIENIC LABORATORY
Iowa's Environmental and Public Health Laboratory
www.shl.uiowa.edu

Final Report: Completion of Milestones Outlined in Exhibit A

July 25, 2012

Sadira Daher, Senior Specialist
8515 Georgia Avenue, Suite 700
Silver Spring, MD 20910

Dear Ms. Sadira,

Please find the State Hygienic Laboratory's final report for the Iowa L-SIP Innovations Subgrant entitled, "**Baldrige with L-SIP for Strategic PHL System Performance Improvements**". The following deliverables were targeted for completion by June 30, 2012. Progress on these milestones, as well as the entire project, are enclosed.

Activities
Workshop data analyzed for project findings, objectives • Data analysis file • Change in knowledge level • % Support to use model and its application
Post-event meetings held • Meeting Minutes
Manuscript from Iowa Quality Center done. • Iowa Quality Center Manuscript
Final Train-the-Trainer manual completed. Trainers identified. • Train-the-Trainer manual • List of Trainers

Sincerely,

Christopher G. Atchison, M.P.A.
Director
State Hygienic Laboratory at the University of Iowa

University of Iowa Research Park
2490 Crosspark Road
Coralville, Iowa 52241-4721
319-335-4500 *Fax* 319-335-4555
1-800-421-IOWA

Iowa Laboratories Complex
2220 South Ankeny Boulevard
Ankeny, Iowa 50023-9093
515-725-1600 *Fax* 515-725-1642

Iowa Lakeside Laboratory
1838 Highway 86
Milford, Iowa 51351-7267
712-337-3669 *Fax* 712-337-0227

A Universal Approach: Baldrige with L-SIP for Strategic PHL System Performance Improvements

Final Report July 2012

Give a description of your project, stating the research question that your project addressed and how that question was answered by your project (i.e. "What is the impact of the public health laboratory system on the public's health?", "What does the ideal PHL system look like", or "What does it mean that there is a public health laboratory workforce shortage and what solutions are available?)

PROJECT DESCRIPTION

Public health laboratories will often engage in strategic planning tools like SWOT (strengths, weaknesses, opportunities, threats) analyses as part of their strategic and operational improvement planning process in order to clarify how to position their organization for the future. However, strategic planning tools alone do not provide a standardized framework that incorporates organizational performance management with Public Health Laboratory (PHL) system standards so that public health laboratories, stakeholders, and partners have a comprehensive analysis from which to identify what the organization and system should look like in the future, and how to get there. Without a standardized framework, laboratories are forced to plan for organizational change and programmatic change separately which can result in objectives that are derived independent from one another. When planning objectives and program objectives are siloed, laboratories are at risk for gaps in objectives as well as a less than optimal investment mix of time, funding and other organizational resources.

The State Hygienic Laboratory at the University of Iowa (SHL) developed a system logic model that marries an objective context, the APHL Laboratory System Improvement Program (L-SIP) and Performance Measurement tool, with a strategic framework, the Malcolm Baldrige criteria, to create a comprehensive thought process to ensure that a thorough strategic plan is created that addresses a full range of system, programmatic and organizational objectives.

SHL created this logic model in order to merge these two nationally recognized tools into one interface, so that organizations can have a single integrated framework that can better inform decisions impacting resources, processes, and partners, and action plans with goals and measures leading to continuous PHL system performance improvements. Malcolm Baldrige, provides the standard organizational structure to align, integrate, and support key *organizational systems*. The APHL L-SIP and the Performance Measurement Tool identifies SPHL *system gaps and needs*. The L-SIP tool can provide PHL system model standards through the use of tool components and key ideas, to develop the strategic planning goals and on-going organizational

improvements that are addressed in the Malcolm Baldrige process so that the organization's strategic plan can be fully aligned with the needs of the PHL system.

SHL received funding to demonstrate this systems logic model for public health practice in the field, through statewide educational workshops with PHL system partners. Feedback and recommendations were used to develop a practical User Guide for dissemination to partners and APHL (with applicability to any PH laboratory or partner). The Iowa Dept. of Public Health (IDPH) was a key collaborator, providing program representatives for workshops and assistance in identifying communication mechanisms to reach partners as well as input on User Guide needs. Consultation services for planning, facilitation, and Guide content were provided through the Iowa Quality Center (IQC), a non-profit organization. The IQC is the administrator of the state Baldrige process and provides program leadership on assessments, training, and annual recognition.

Outcomes from workshops led to the development of the User Guide which applies the logic model to develop practically-based operational improvement plans with a conscious recognition to align goals within the PHL system standards/indicators. 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. Baldrige with L-SIP provides a universal approach to determine performance improvement priorities, define goals within PHL system standards, and develop action plans to effectively and efficiently achieve the desired results. **The model and subsequent Guide can be used by any PH laboratory or system partner for daily operational decisions, strategic planning, and on-going PHL system improvements.**

The project addressed the question: (*5) What does the ideal PHL system look like?* Collaboration and a common understanding of how partners' roles support the PHL system and the implications of process or system changes to overall performance, is essential to achieving and sustaining results. For example, the Public Health Advisory Council, established to provide guidance to IDPH as part of the Iowa Public Health Modernization Act (as set forth in Iowa Code in 2010), has endorsed laboratories' explicit inclusion in standards for Iowa's accreditation. 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, customer, and stakeholder feedback obtained; and 5) action plans deployed to ensure a temporal sequence.

Include details on how each milestone was met. Explain any changes or modifications to the project. Also include measures such as the following: How many participants received and/ or used materials created? How many individuals and/ or sites participated?

If there was a training/ event / meeting/ forum: Did participants find the information useful? What impact did the project have on participants' knowledge of the laboratory practices addressed? How did participants/ the targeted audience use or plan to use the information for laboratory improvement?

PROJECT MILESTONES AND MODIFICATIONS

Pre-planning meetings with the Iowa Quality Center were held from January through March to develop the workshop materials and sequential method to introduce the model to participants. The planning was extended an additional month in order to enhance the model (see Figure 1 below), as well as create tools, templates, worksheets, and workshop content. The L-SIP assessment tool was incorporated into Survey Monkey for participants to conduct an individual assessment prior to the workshop. The pre- and post-evaluation were also developed using Survey Monkey software.

Prior to conducting the workshops, the individual L-SIP assessment and model tools were piloted with the SHL strategic planning leadership team during a retreat in March. The feedback from members was used to further refine the method to demonstrate the use of the model as well as serve as a basis to develop the organization's top level strategic goals based on L-SIP summary data and group consensus on critical areas of improvement. Another strategic planning retreat was held with SHL leadership in June and **successfully led to development of a strategic plan with L-SIP assessment data providing input to the strategic planning design for strategies and tactics to achieve top level goals**. Positive feedback during the retreat included developing a familiarity with L-SIP and having a framework to create the detailed strategic plan.

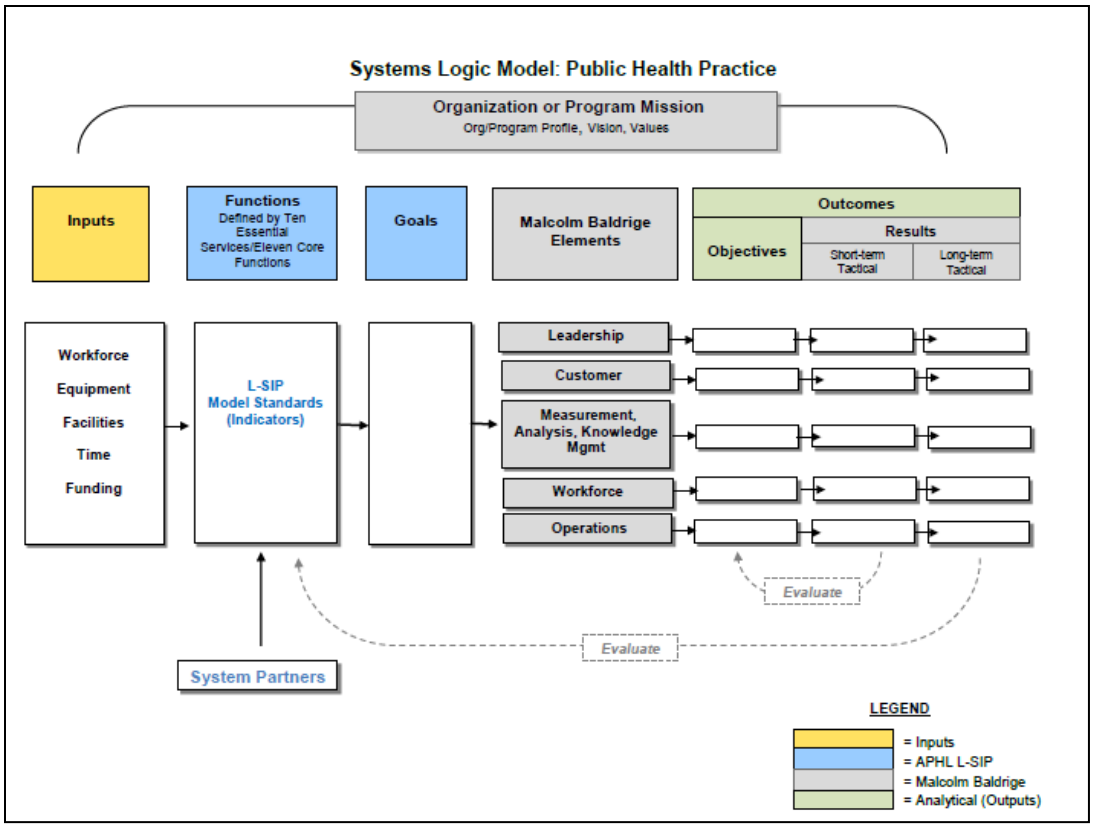

Figure 1: Systems Logic Model

During March, the workshop dates, location, meeting and travel logistics were completed. Workshop agenda, presentations, and hand-outs were completed. Workshop locations were scheduled for central, western, and eastern Iowa for the following dates: April 10, Sioux City; April 25, Ankeny; and April 27, Coralville. The original invitation list of PHL system partners included state agencies such as the Iowa Department of Public Health (IDPH), local governance (including representatives from boards of health), county health departments, hospital and private laboratories, clinical and environmental laboratories, and researchers. Lab representatives also included those through the clinical Lab Advisory Committee (LAC). A total of sixteen individuals were present for the workshop conducted in Ankeny, Iowa, on April 25. Due to the lack of numbers, the workshops in Sioux City and Coralville were cancelled. A pre-evaluation and individual L-SIP assessment was sent to participants prior to the workshop and the results summarized and presented during the event.

The Advisory Group met on May 10 and included members: Chris Atchison (State Hygienic Laboratory), Lorelei Kurimski (State Hygienic Laboratory), Martha Gelhaus (Iowa Department of Public Health), Jeannine Moody (Iowa Public Health Association), Sara Imhoff (Iowa Counties Public Health Association), and Heidi

Schleicher (University of Iowa MPH practicum). The group discussed the feedback from the April 25 workshop, the approach for future events, the practical application of the model, and overview on presentation of the User Guide to meet the needs of PHL system partners. Advisory Group members supported the importance of creating the User Guide for a level of understanding with partners who may have limited or no experience with L-SIP or Baldrige methodology and restricted resources to institute improvement initiatives within their organization.

Based on input from the Advisory Group and feedback from participants at the April 25 workshop, it was recognized that a change was necessary to recast the premise of the constituent group for the workshops. The next workshop was tailored as a Summit, and held on June 20 in Ankeny, Iowa and included lab representatives through SHL's new Iowa ELRN. It was fundamentally re-characterized around the purpose of our engagement, rather than the engagement itself, and focused specifically on programmatic activities within the PHL system and associated with environmental response to emergencies/disasters. The Summit was co-sponsored with the Iowa Department of Public Health Environmental Health Division and attended by twenty individuals. Participants represented the Iowa Department of Public Health, the Iowa Department of Natural Resources, municipalities, local public health, private laboratories, and SHL. Workshop agenda, presentations, and hand-outs were modified and completed. Individual L-SIP assessments were completed prior to the event and the data was summarized and presented during the Summit. Data analysis included the mean, median, and standard deviation (Figure 2). Based on the L-SIP summary report and PHL systems discussion, the participants expanded their improvement initiatives to include all environmental health programs and services within the state PHL system. Using the logic model tools, the participants developed several goals with specific strategies and tactics. **This programmatic approach was so well received that it led to group consensus to continue meeting using future summit forums**. Positive feedback during the event included having an objective assessment tool using public health terminology, useful handouts, and a positive environment for the first iteration as a group.

The original intent was to develop a **Train-the-Trainer** manual with hardcopy publication and single-page quick reference guide. In order to meet the needs of PHL system partners through easily understandable instructions and provision of readily available tools and templates, the manual was converted to an electronic User Guide with resources. The Guide was developed in partnership with the Iowa Quality Center during post-event discussions and manuscript template to develop the lay-out. The Guide and resources are now available on USB drives and will be distributed to workshop/summit participants, the Advisory Group, key organizations such as the Laboratory Advisory Committee, and for future improvement events. The guide and tools will also be available on the SHL web-site and through the APHL Membership Resource Center (MRC). The Guide provides

step-by-step instructions, benefits, tips, and examples on how to employ the logic model and tools to develop improvement plans that focus on:

- Single programs operating within the PHL system,
- PHL services within a distinct geographical region, or
- Internal assessment of individual PHL system partner organizations.

The tools include the L-SIP independent assessment, the Baldrige Organization/Program/Enterprise Profile, the Baldrige Intervention Plan Worksheet, and an example. The guide also contains supplemental materials such as the APHL L-SIP assessment tool and the Malcolm Baldrige Criteria.

FEEDBACK/EVALUATION FROM WORKSHOPS

While the pre-evaluation and individual L-SIP assessments were well received, an adequate number of post-evaluation responses were not collected (more than 50% lower than pre-evaluation participation rate) and it was difficult to draw conclusions. Much of the feedback provided in the earlier narrative was based on discussions during the workshops.

Included is an example of the L-SIP summary data analysis (see Figure 2) from the June 20 Summit.

Surveys completed (n)= 13
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 STANDARDARD & KEY IDEAS		MEAN	MEDIAN	STD DEV	68% of numbers fall within range	
						LOWER RANGE	UPPER RANGE
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.**	**69.2**	**75.0**	**23.2**	**46.1**	**92.4**
		1.1.2- The SPH Laboratory System monitors congenital, inherited, and metabolic diseases of newborns and participates in state and federal surveillance systems.	50.0	50.0	**22.4**	27.6	**72.4**
		1.1.3- The SPH Laboratory System supports the monitoring of chronic disease trends by participating in state and federal surveillance systems.	**43.2**	50.0	19.7	23.5	62.8

	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.	55.8	50.0	**18.1**	37.6	**73.9**
		1.2.2- The SPH Laboratory System partners collaborate to strengthen electronic surveillance systems.	59.6	50.0	26.1	33.5	**85.7**
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.**	**66.7**	**75.0**	**22.2**	**44.5**	**88.9**
		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.	55.8	50.0	**23.2**	32.6	**78.9**
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.	**46.2**	50.0	24.7	21.5	**70.8**
		3.1.2- The SPH Laboratory System creates and provides education opportunities to health and non-health community partners.	59.6	50.0	26.1	33.5	**85.7**
	3.2: Empower Partners	3.2.1- Relationship-building opportunities are employed to empower community partners.	50.0	50.0	30.6	19.4	**80.6**
ESSENTIAL SERVICE #4: MOBILIZE COMMUNITY PARTNERSHIPS TO IDENTIFY AND SOLVE HEALTH PROBLEMS	4.1: Partnership Development	**4.1.1- Partners in the SPH Laboratory System develop and maintain relationships to formalize and sustain an effective system.**	**40.4**	**25.0**	28.0	**12.4**	68.4
	4.2: Communication	4.2.1- SPH Laboratory System members communicate effectively in regular, timely, and effective ways to support collaboration.	**48.1**	50.0	19.0	29.1	67.1
	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.	51.9	50.0	27.9	24.0	**79.8**
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.	**46.2**	50.0	22.5	23.7	68.6
	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.	**42.3**	50.0	21.4	20.9	63.7
	5.3: Dissemination and Evaluation	5.3.1- The plans and policies that affect the SPH Laboratory System are routinely evaluated, updated and disseminated.	**46.2**	50.0	20.0	26.1	66.2

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.	56.8	50.0	19.7	37.2	**76.5**
		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.	56.3	50.0	24.1	32.1	**80.4**
	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.	52.1	50.0	22.5	29.6	**74.6**
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.**	57.7	**75.0**	**21.4**	36.3	**79.1**
		7.1.2- The SPH Laboratory System provides timely and easily accessed quality services across the jurisdiction.	57.7	50.0	25.8	31.9	**83.5**
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.	**47.9**	50.0	29.1	**18.8**	**77.0**
	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.	**46.2**	50.0	20.0	26.1	66.2
	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.	50.0	50.0	14.4	35.6	64.4
		8.3.2- The SPH Laboratory System identifies and addresses current and future workforce shortage issues.	**34.6**	**25.0**	**16.3**	**18.4**	**50.9**
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.**	**34.6**	**25.0**	**21.7**	**12.9**	**56.4**
	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.**	**34.6**	**25.0**	**19.2**	**15.4**	**53.8**
		9.2.2- The availability of personal and population-based laboratory services throughout the state is regularly evaluated.	**30.8**	**25.0**	**11.0**	**19.8**	**41.7**
		9.2.3- The quality of personal and population-based laboratory services provided throughout the state is regularly evaluated.	**46.2**	50.0	**17.2**	28.9	63.4

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.**	**40.4**	**25.0**	**24.0**	**16.4**	**64.4**
	10.2: Implementation, Evaluation, and Dissemination	**10.2.1- The SPH Laboratory System promotes research and innovative solutions.**	**46.2**	**25.0**	26.7	**19.4**	**72.9**

Figure 2: L-SIP Summary Data from June 20 Summit

A presentation on this project was given by Director Chris Atchison at the Iowa Governor's Conference on Public Health on April 17 to a broad audience of public health practitioners. Audience feedback on useful information included examples of how to use the tool, a framework was provided for evaluation and was viewed as essential for strategically overcoming institutional weaknesses, and how to use the model to work towards identifying weaknesses and establishing goals to improve. **More than 90% of those who completed an evaluation agreed/strongly agreed that the content was relevant to their professional needs and will enhance their professional abilities.**

A poster presentation was also given by Director Chris Atchison during the annual APHL conference held May 19-21 in Seattle Washington to share to approach and benefits of the logic model with conference participants.

Describe any budget changes that occurred during the course of the project.

BUDGET MODIFICATIONS

Due to an extended illness of one of the lead staff members working on this project, as well as feedback from the first workshop, the project plans were modified. Two workshops were held instead of three. Printing/publication costs included the purchase of 100 USB drives and downloading content for the User Guide and tools. These were completed by the Iowa Quality Center.

Non-monetary support for the project, including administering the first workshop pre- and post-evaluation, was provided from Graduate Research Assistant Varun Reddy, a MHA student in the College of Public Health at the University of Iowa. Additionally, Heidi Schleicher, a MPH student from the University of Iowa

College of Public Health targeted this project as her Practicum focus and assisted with development of the User Guide content.

List any partnerships with other public health agencies, academia, or other types of laboratories formed through this project.

ENHANCED PARTERSHIPS

Through support of the project and co-sponsoring the Summit, the Iowa Department of Public Health has been a vital partner to demonstrate the realistic application of the model and tools with future opportunities to collaborate and improve other programmatic areas. The Iowa ELRN Summit had their first meeting in June 2011. By reconvening the Summit, employing the model, and moving forward on specific action plans, system partners developed a collective understanding of gaps and needs within the PHL system which led to agreement to work in partnership. In addition, the joint venture of SHL and the Iowa Quality Center led to the planning and deployment of the model and tools, and are now available to the Center for consultation, state-wide networks, training, events, programs, and facilitation. **The model has a universal application not only throughout public health, but any performance system and with any set of performance standards.**

Will your laboratory sustain the project? If so, how? Or are additional funds needed?

SUSTAINING THE MODEL

Sustaining the application of the model will be ongoing through practical application within SHL, as well as with state PHL system partners by identifying programmatic and internal organizational opportunities for improvement. For example, the model will continue to serve as a foundation for evaluation of the SHL strategic plan as it is implemented over the next twelve months. Improvement plan development and deployment for environmental health programs and services will continue in partnership with the Iowa Department of Public Health with the next Summit to be scheduled in August. A strategic planning retreat led by The Center for Emerging Infectious Diseases at the University of Iowa is scheduled for July 27. The retreat with include partners from throughout the state and SHL will provide support and facilitation to utilize the model for Center planning initiatives.

Beyond the funding period and at one-year post-assessment, SHL will measure the impact of the training that led to new strategic plan or improvement plan developments.

The User Guide and tools will be promoted and available on the SHL web-site for access. Opportunities to share application of the model will be pursued through national, state, and local conferences as available.

Manuscripts for publication will be submitted to organizations with a public health practice focus in order to reach a large audience. This could include the Iowa Public Health Association (IPHA), the Iowa Environmental Health Association (IEHA), the American Public Health Association (APHA), and/or the National Environmental Health Association (NEHA).

Were there gaps in the overall project that had not been anticipated? If so what were they? Discuss lessons-learned and what you might have done differently. Describe areas for improvement if you were to do this project again.

GAPS AND LESSONS LEARNED

The original approach to the workshops was to conduct an exercise and demonstrate the use of the model and evaluate its application. However, it was recognized after receiving a poor response to attend the workshops, as well as feedback from the first workshop and input from the Advisory Group, that a refocus was necessary. The new approach used the model as a mechanism to achieve an improvement plan within a specific area and include system partners who could directly impact system improvements within the scope of their responsibilities. While the L-SIP assessment tool provides national performance standards that can be universally adopted, the scope of the assessment may be so inclusive that developing strategic improvement plans with representatives from throughout the system may not viable while managing internal organizational systems. Enhancing the tool for multiple functional uses could provide additional opportunities for PHL system improvements by providing partners within the PHL system a scope that could maximize resources while developing achievable and sustainable plans. Thus the first step in performing an assessment for strategic improvement planning is to clearly define the scope of the enterprise to be improved and identify key PHL Stakeholders to invite in the evaluation process. **This approach was strongly received by participants with support to continue with future improvement initiatives.** In addition, a Train-the-Trainer manual was originally proposed. This was modified to a step-by-step User Guide with tools and templates that allow any PHL system partner to immediately apply the model, even with limited knowledge of L-SIP or Baldrige methodology.

Due to the low response rate of the post-evaluation, it is recommended that it be administered at the closing of the workshop and as part of the feedback discussion, rather than distributed via survey software following the event.

Recommendations for Improving L-SIP Assessment Tool:

- Reduce the inclusion of the word “and” by segmenting Model Standards/Key Ideas to provide more specificity.

- Add Model Standards and Key Ideas that address financial viability and sustainability.
- Enhance the tool and instructions to clarify the context of the laboratory system being improved (e.g. clinical, environmental, agricultural).
- Support efficiency by enabling pre-assessment and including statistical tools such as the mean, median, and standard deviation to prioritize activities.

DELIVERABLES

- ***User Guide & Tools: Public Health Practice Improvement Planning***
    - User Guide
    - 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)
- ***Example of Workshop Agenda (Adobe pdf)***
- ***Example of Workshop Hand-outs (Adobe pdf)***
- ***Example of Individual L-SIP Assessment in Survey Monkey (Adobe pdf)***
- ***Workshop pre- vs. post- evaluation data***

APHL SUPPORT

The State Hygienic Laboratory would like to recognize the APHL Innovations in Quality Public Health Laboratory Practice grant program for making this innovative project possible. SHL would also like to thank the APHL Laboratory Systems Improvement Program for providing the L-SIP assessment tool and other resources.

ACKNOWLEDGEMENTS

The State Hygienic Laboratory would like to acknowledge the following individuals and organizations whose contributions led to the successful completion of this project:

- Gary Nesteby- Iowa Quality Center
- Varun Reddy (MHA student)- University of Iowa, College of Public Health
- Heidi Schleicher (MPH practicum)- University of Iowa, College of Public Health

- Martha Gelhaus- Iowa Department of Public Health
- Ken Sharp- Iowa Department of Public Health
- Jeannine Moody- Iowa Public Health Association
- Sara Imhoff - Iowa Counties Public Health Association
- Shari Heick, Pat Blake, Kathy Fait, Ann Armstrong, and Yasmine Rezai- State Hygienic Laboratory
- Workshop/Summit participants