

Executive Summary

The Life Science Career Alliance (LSCA) strategic and tactical planning process was initiated with full board support and participation in March 2005. In July 2005 the Board approved the development of a full 5-year plan to be developed under the supervision of an ad-hoc strategic planning committee of the board. The goal was to produce a comprehensive draft plan for the future activities and funding for the LSCA. This plan was developed and is intended to include all sectors of the life science industry in Southeastern Pennsylvania, including health care, biotechnology and pharmaceutical organizations.

The plan connects the organizational context for the LSCA with its vision, mission, values, goals, strategic priorities and tactics. The foundation for growth builds from the strengths developed over its first two years of operation. These strengths include leadership in connecting and mobilizing the numerous regional organizations with related missions of maintaining and improving the regional life science workforce. Another central focus of this plan is creating a sustainable organization while delivering immediate value to its constituents and Southeastern Pennsylvania.

This strategic and tactical plan was developed for the next three to five years, a period of rapid growth and transition from start-up to sustainable organization. The goals and strategic priorities were designed for this period; however, some of these priorities may be completed in less than five years. Each of the strategic priorities has shorter-term tactics associated with it. The tactical plan will be used to develop an implementation plan, or Work Plan, that will need to be updated regularly.

Organizational Context

The organizational context for the alliance is based on an assessment of market dynamics and trends, positioning among other related organizations, and strategic alliances.

Background

Life Sciences is one of the most important industries in the nation and in Southeastern Pennsylvania based on its proportion of the economy, growth of an aging population, impact on quality of life and sustainability of high wage jobs. The life science industry is comprised of healthcare delivery, biotechnology, pharmaceutical and other related and supporting fields. In terms of careers across the life science industry there are several commonalities, including the need for expertise in science and math combined with specialized training needs for each field. In the Philadelphia region there is a total existing life science workforce of more than 250,000 workers across the industry and projected shortages versus demand in the range of 5% to 10% over the next decade.

- In 2003, health care spending in the United States reached \$1.7 trillion, and was projected to reach \$1.8 trillion in 2004, representing 15.3% of Gross Domestic Product (GDP). It is projected that the percentage will reach 18.7 percent in 10 years.¹
- 173,095 workers are employed in biotechnology, bioinformatics, nanotechnology, and pharmaceutical sciences in the Greater Philadelphia region, which includes the Philadelphia metropolitan statistical area (MSA), and five adjacent counties in New Jersey and Delaware.²
- The average bioscience wage in 2002 in Pennsylvania was \$65,060. This wage is 184% higher than the average in Pennsylvania private employment.³

The region needs the Life Science Career Alliance because there are 1) imbalances in supply, demand and capacity, 2) many organizations addressing a variety of aspects of the life science workforce issue without a coordinating entity, and 3) several recent workforce development reports have made specific recommendations that require an organization to execute.

Imbalances in Supply, Demand and Capacity

Supply shortages in health care are expected, as stated in an excerpt from the LSCA Delaware Valley Life Science Workforce 2003 report:⁴

Forecasts of supply and demand indicate:

¹ Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group; and U.S. Department of Commerce, Bureau of Economic Analysis and Bureau of the Census.
www.cms.hhs.gov/statistics/nhe/projections-2003/t2.asp

² LSCA and Innovation Philadelphia 2005 report, p. 4.

³ Milken Institute and Pennsylvania Bio, "Pennsylvania Bioscience Industry report," p. 8. Data sourced from the U.S. Department of Labor ES-202 database (QCEW).

⁴ LSCA "Delaware Valley Life Science Workforce: An Analysis of Current and Future Needs," 2003 update, p. 8.

- *Assuming equilibrium between supply and demand in 2000 and the conditions remain the same, that the nursing shortage will grow to more than 9,000 RNs and 1,500 LPNs or an 18% shortage of RNs and a 16% shortage of LPNs for the region by 2010. The forecasted shortage of RNs is about twice as large as our earlier forecast. This more recent forecast benefits from the availability of more accurate estimates from the analysis of current training programs reports and re-licensure surveys of nurses cooperatively conducted by the Pennsylvania Department of Health and the Department of State's Bureau of Professional and Occupational Affairs.*
- *Of the other fields for which estimates could be projected, shortages are also projected for Cardiovascular Technologists, Clinical/Medical Lab Technicians, Medical Assistants and Surgical Technologists.*
- *After 2010, projected shortages are likely to worsen, and shortages will appear in other occupations as the first impact of the Post World War II baby boom begins to produce accelerated rates of retirement in an aging life science workforce and as the service needs of an aging regional population grow.*

Many Organizations

Dozens of organizations work on various aspects of the life science workforce, including public schools, post-secondary schools, health care employers, pharmaceutical and biotechnology companies, state and federal departments of education and labor, industry associations, and non-governmental organizations. These organizations work on the global, national, state, regional, and local levels with overlapping missions and differing constituents. The results of these organizations can be improved with a coordinating entity that encourages and drives collaboration.

Recent Report Recommendations

Several recently issued reports made recommendations that need to be executed by an organization, such as the Life Science Career Alliance. Some examples of these recommendations are:

- The first step in developing an adequate information system would be to establish a regional center for workforce analysis to facilitate better use of existing information and to facilitate its improvement.⁵
- An organization is needed that could facilitate corporate-education linkages.⁶
- The region would benefit considerably from a clearinghouse or other process for linking life science employment and education information.⁷
- The proposed clearinghouse can help life sciences firms develop career ladder programs.⁸

⁵ LSCA DLSVW, p 9.

⁶ LSCA IP report, p. 18.

⁷ Ibid, p. 19.

⁸ Ibid, p. 20.

Additional recommendations for capacity building are in other reports, such as the Capacity Building /Infrastructure report from the Latino community. Among these recommendations are raising awareness and competence of Latino health care workers, e.g., collaborating with health professionals, especially nursing, to create a strategy to expand the number of Latino graduates, increase cultural competency of non-Latino graduates and enhance cultural of the educational institution itself. These examples highlight the need for the coordinating organization to track all the data and recommendations.

Strategic Mission

Vision

The Life Science Career Alliance will be a recognized leader in workforce development for the life science industry in Southeastern Pennsylvania. The Alliance will promote job creation and economic growth and will balance workforce supply and demand.

Mission

The mission of LSCA is to maintain and increase the strength of the life sciences in Southeastern Pennsylvania by maintaining and improving the regional life science workforce. Its goals are to:

- **Mobilize** regional resources to help ensure the availability of a skilled workforce available to support growth of the life science sector of our economy, including health care, pharmaceutical and biotechnology organizations;
- Systematically identify and **monitor** regional workforce supply/demand for life sciences;
- **Publicize** the opportunities for life science careers in the region;
- Promote **collaboration** on workforce development within the life science sector.

Values

- **Potential**
All individuals and communities have the ability to achieve their innate potential. The Life Science Career Alliance believes that creating career awareness, access to educational programs, economic opportunity and support will foster the regional potential of our communities as they fully embrace life science careers and help grow the economic potential of our region.
- **Unification**
The Life Science Career Alliance serves as a unifying force to increase collaboration among the numerous independent organizations addressing workforce development for the life science industry.
- **Collaboration**
There are numerous local, state and national organizations addressing workforce issues in Southeastern Pennsylvania. The Life Science Career Alliance is committed to mobilizing these resources by creating a collaborative environment to bring permanent solutions to our workforce needs.
- **Inclusion**
The Life Science Career Alliance respects all dimensions of diversity. The life science workforce in Southeastern Pennsylvania needs to reflect regional demographics and embrace

the rich and diverse cultures of our region. The Life Science Career Alliance will actively promote career opportunities to under-represented communities in Southeastern Pennsylvania.

- **Integrity**

The Life Science Career Alliance conducts itself with integrity in all its activities. It recognizes that whether working with industry, education or workforce partners that integrity must be the hallmark value that drives its practice and commitment to grow the regional life science workforce.

Internal Assessment

The Life Science Career Alliance was established in 2003 as a subsidiary of the Philadelphia Workforce Investment Board.

Program Overview & Accomplishments

In 2003 the LSCA produced a regional workforce report that documented the need for life science workers in region. The report provided pivotal data to bring the issue of health care workforce shortages to the attention of policy makers. The report also created a model for supply/demand forecasting model that was subsequently transferred to the Pennsylvania Center for Workforce Information and Analysis (CWIA) to create a supply/demand model for the State.

In 2003 the LSCA, working with the Regional WIB collaborative, supported the Pennsylvania State WIB in the development of the Pennsylvania Center for Health Careers. LSCA board members serve on the board and various committees and the Executive Director participates as a member of the Leadership Council.

In 2004, the LSCA completed a detailed 15-month work plan that outlined tangible goals and objectives for the organization. Its strategic priorities were stated as:

- workforce development
- youth programs and outreach
- education and training capacity
- monitoring and metrics

In May 2004, the LSCA was instrumental in leveraging and coordinating more than \$600,000 in Rapid Response funds from the PA Department of Labor and Industry. The effort provided a preemptive measure to prevent the lay-off of more than 250 workers and allowed for the development of a model to assist the healthcare industry on a large scale through the public workforce system.

In addition, for the past two years, the LSCA has played a significant role in Health Careers Week, a statewide initiative created to increase awareness of health careers in an effort to address workforce shortage issues. Combined over the past two years, the LSCA has facilitated events that reached more than 1000 adult job seekers and 1200 middle and high school students.

In April of 2005, the Pennsylvania Department of Labor and Industry provided a grant of \$400,000 to develop a novel new program to align education and training resources for the biotech industry. The Biotech Human Capital Investment Project was announced on the eve of the BIO 2005 Conference held in Philadelphia this year. The project will support human capital development of four emerging biotechnology companies in Southeastern Pennsylvania and provide a platform to align education and training institutions in the region to meet the biotechnology industry sector.

In June of 2005 the LSCA supported the BIO 2005 conference that hosted 18,000 business, technical, scientific, and governments to the largest biotechnology in the world. The LSCA served on planning committees and assured participation by regional educational institutions.

SWOT Analysis

In preparation for the strategic planning session on March 24, 2005 Board Members and selected representatives from non-Board Member organizations in the region participated in a SWOT analysis. The key findings from that analysis are summarized below, and in the past six months the organization has taken steps to take advantage of the strengths and opportunities and mitigate the weaknesses and threats. Many of these steps have been incorporated in this strategic and tactical plan.

Strengths

- There is strong, positive alignment on vision and target constituency.
- LSCA has been successful to date. It has made good progress for its stage of development and has made excellent connections.

Weaknesses

- The Board had split expectations on its role in strategic decision-making, specifically how actively the Board should be involved in routine decisions. The development of the Executive Committee is expected to address this issue.
- LSCA is small in terms of resources with a broad and challenging mission.
- Many of the target constituents that value the services are small companies with minimal resources to fund the organization.

Opportunities

- The pharmaceutical and biotechnology industry has had little involvement with LSCA in the past, but has significant needs and resources. LSCA recently initiated a significant project with regional biotechnology organizations.
- Although the LSCA has been successful on a project level, it has an opportunity to communicate these successes in compelling stories and in quantitative terms. With its current legal structure many funding options are available.

Threats

- Sustainable funding is widely recognized to be among the most critical issues that will determine LSCA's future. The costs of membership, whether a Board membership or broad industry membership, need to be reasonable and funding needs to be sought from multiple sources.

Strategic Objectives

Goals (3-5 Years)

1. **Mobilize & Collaborate** - The LSCA will mobilize regional resources to increase the capacity of the regional life science workforce by efficiently and effectively developing programs that support education and training opportunities and provide career ladder models.
2. **Monitor** - The LSCA will generate research and monitor key supply and demand indicators in order to synthesize and broadly disseminate data and analyses. It will, therefore, become a recognized as a strategic information resource for the life science industry.
3. **Publicize** - The LSCA will address needs and opportunities in the life science workforce by promoting career awareness, for youth and mid-career workers.
4. The LSCA will build a sustainable infrastructure and organizational capacity.

Strategic Priorities for Each Goal

Goal 1: Mobilize & Collaborate - The LSCA will mobilize regional resources to increase the capacity of the regional life science workforce by efficiently and effectively developing programs that support education and training opportunities and provide career ladder models.

- Serve as a primary point of contact for local, state, and federal agencies regarding workforce development for the life science industry.
- Develop programs for redeployment, retraining and expansion.
- Seek funds for regional organizations.
- Develop core curricula, career ladders and skill-set models for key occupations.
- Build a pipeline for youth into careers in the life sciences.
- Assist recruitment efforts to meet the demand for teaching faculty.
- Identify and promote recruitment models for under-represented groups of people.

Goal 2: Monitor - The LSCA will generate research and monitor key supply and demand indicators in order to synthesize and broadly disseminate data and analyses. It will, therefore, become a recognized as a strategic information resource for the life science industry.

- Define and communicate the critical life science workforce needs for the region.
- Create a two-way communications platform to position LSCA as a primary source for life science workforce information.
- Monitor and communicate effectiveness of LSCA workforce strategies.

Goal 3: Publicize - The LSCA will address needs and opportunities in the life science workforce by promoting career awareness, for youth and mid-career workers.

- Promote enrollment in hard-to-recruit life science professions, particularly for youth and mid-career workers.
- Promote career ladders for the life science sector, including healthcare and biotech/pharmaceutical industries.
- Develop a communications plan to promote programs that have been developed.

Goal 4: The LSCA will build a sustainable infrastructure and organizational capacity.

- Develop a recruitment plan that will strengthen Board membership in all life science sectors.
- Develop a revenue plan that will encompass state and federal funding, expanded WIB support, a funding stream from pharmaceutical and biotech, and major grants and contracts.
- Develop a membership model.

Funding

The objective of the LSCA funding strategy is building a sustainable revenue stream to cover fixed operating expenses. Staff salaries are the largest item in the operating budget as the staff is projected to grow to seven people by the end of the planning cycle. The revenue is projected to come from multiple sources, including WIB sponsorship, program grants, and membership fees for voting seats on the Board. Grants funding will be used primarily for specific programs. The membership model projects its revenue in 2006 from current Board Members at current funding levels then grows the number of Board Members to 35 over five years creating a sustainable funding stream that covers 70% of the operating budget. General membership fees from non-Board members, other operating grants, and additional contributions from Board Members above the membership fee level will be used to cover the remaining 30% of the operating budget. This funding split between members and non-members is considered transitional for the duration of this plan. The non-member percentage will increase over time.

The first step towards sustainability is transitioning to a formally structured membership model with the majority of funding coming from the existing WIB sponsors and current Board members. Defining the details of the membership categories is an initial tactic. Fee for services are not itemized in these projections, but could be added.