DBEDT
THE DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
STATE OF HAWAII

YEARLY ACTIVITY PLAN (YAP) - FY '08

Division/Attached Agency: High Technology Development Corporation

Program Name: Kakaako Life Sciences Incubation & Innovation Center

Program ID: BED 143

I. PROGRAM PLANNING

Problem, issue or opportunity statement: Describe the problem(s), issue(s) and/or opportunity(ies) your program is attempting to respond to. Identify the participants (individuals, companies, industry sectors, etc.) engaged in this problem, issue and/or opportunity.

The State of Hawaii has an opportunity to assist the development of a life sciences industry The revitalization of Kakaako has made it home to the new University of Hawaii John A. Burns School of Medicine (JABSOM) and proposed University of Hawaii Cancer Research Center of Hawaii, alongside the Pacific Biomedical Research Laboratory, Children's Science Discovery Center, and commercial life science activities.

Private/public sector research and analyses of Hawaii's market indicate there is a growing nucleus of life science companies in Hawaii and significant number of missed opportunities because there is no commercial wet laboratory space available to lease. Most multi-tenant buildings cannot accommodate the specialized requirements for wet labs because the mechanical and/or electrical systems are not sized to accommodate the loads wet labs require. Furthermore, the private sector is reluctant to finance wet lab and specialized space build-outs for biotechnology companies without lengthy lease terms that fully amortize the improvements and most early-stage biotechnology companies cannot project their space needs much beyond a few years, let alone the long-term that most landlords require. The cost of construction is at least 3 to 4 times higher for wet laboratory space than it is for office space. In addition, construction costs in Hawaii are 30% higher than the West Coast and even higher compared to the East Coast. Land costs in Hawaii are high resulting in more lucrative developments of residential projects. As compared to East Cost (e.g., Boston), where land costs are also high, but today the highest and best use of land is commercial wet laboratory space. With the growth of commercial biotechnology and life sciences industries, we are on our way to tipping the fulcrum to a balanced economy with quality better paid workforce and scarce land resources utilized for a more technology based economy.

Commercial wet laboratory space in Kakaako presents a tremendous opportunity for university technology transfer through licensing and patents, new funding for research and development projects, and commercialization of technologies – where the greatest number of jobs are created. Unlike some clusters of the technology sector where commercialization required heavy manufacturing burdening our State's high cost resources (e.g., electricity, land), the commercialization stages for most life sciences companies can be handled within the State (e.g., many European countries face similar challenges to Hawaii, but can still maintain manufacturing stages within their own countries rather than companies having to uproot to another locale). These activities will provide new higher paying quality jobs for Hawaii's citizens and keep those jobs and citizens in our State.

Need and partners: Specify the need for government intervention. Provide supporting evidence. Identify any partners you will be working with to address the problem, issue and/or opportunity.

To address this problem the Governor of the State of Hawaii and the Hawaii State Legislature introduced bills to provide wet laboratory space in Kakaako. Senate Bill 896 passed and became Act 150 by signature of the Governor of the State of Hawaii in June 2007. Act 150 appropriates initial funding in

fiscal year 2007-2008 and fiscal year 2008-2009 to the High Technology Development Corporation (HTDC) to negotiate a ten-year lease to house a technology incubator and innovation center in a life sciences research complex in Kakaako, and for planning, development, and operational costs of the center. This Act is effective July 1, 2007.

There is strong support from research institutions, major estate landowner, wet laboratory developers and financiers, life sciences companies, life sciences industry council, business community, educators, the administration and the legislature.

This project meets the objectives of the state administration to develop an innovation infrastructure and economy (meaning less reliance on land-based economy); the cornerstone of Governor Lingle's State of the State address before the 24th Legislature in January 2007.

Desired results (outputs, outcomes and impacts): Identify desired results, what success will look like, by describing what you expect to achieve near (0-2 years) and long-term (2-6 years).

0-2 Years Desired Results:

1. **Outputs:** Meet with stakeholders and maintain open communications on the expectations of Act 150 (July 2007-ongoing); legislation from the administration is submitted to increase HTDC high technology special fund ceiling to allow for new sources of funds from the operation of the life sciences incubation and innovation center (September 2007 – May 2008); participate in meetings with developers and life science companies (sub-lessees) to clarify occupancy needs and costs which are basically pass-through from the developers (July 2007 – lease negotiation completion); refine analysis of potential risks (financial and other risks to the State) under the lease with the developers (June 2007 – lease negotiation completion); finalize strategy and plan to maximize occupancy levels; finalize lease negotiations with developers with assistance from consultants including a Special Deputy Attorney General and other consultants (June 2007 – lease negotiation completion); assessments of potential new incubation program funding for life science companies from grants and other sources (Spring 2008); evaluate benefits of entering into agreement with the High Technology Innovation Center (HTIC), a state non-profit 501-c(3), to manage operations of the incubation and innovation center and secure funding sources appropriated to cover lease expenses including general fund appropriations in Act 150 (Spring 2008). Ability to devise a mechanism to capture any unused monies to be accrued for future years should there be bigger operational loss than $250K/yr.

2. **Outcomes:** Sub-leases with companies and HTDC lease negotiations completed and subject to final approvals; presentation and recommendation to the full Board of Directors of HTDC and Director of Budget & Finance; official approvals from the HTDC Board of Directors and Director of Budget & Finance; fully executed lease agreement between HTDC/State of Hawaii and the project developers; operational agreement executed between HTDC and HTIC.

3. **Impacts:** Execution of a lease with the developers will allow project financing negotiations and commitments to move forward. Developer will also complete project entitlements (e.g., master lease, permits, etc.), financing arrangements, and begin construction.

2-6 Years Desired Results:

1. **Outputs:** Attend project coordination meetings with developers' consultants (architects and engineers); refine and coordinate with sub-lessees use of space and operational needs relating to use of space; research project operating policies and procedures manual; conduct interface and coordination meetings with staff internally and interdepartmentally, as needed; implementation and coordination of marketing plan to maximize occupancy.

2. **Outcomes:** Completion of construction and move-in of life science companies; implementation of project operations manual; implementation of incubation program (technical and business assistance); development of a reasonable pipeline and coordinated strategy for potential and qualified wet laboratory

users.

3. **Impacts:** Establishment of state's commitment and support for growing biotechnology and life sciences industries, which would encourage further investment in Hawaii. Availability of wet laboratories for growth and retention of biotechnology companies. Development of new research opportunities involving drugs and therapies creating a unique R&D culture in Hawaii. Establishing a pipeline for commercial properties for University-originated research for tech transfer (e.g., JABSOM's BioSPOT incubator). Opening of opportunities for scientific and research collaboration with East and West. Beginnings of a development for an international incubation and innovation network based in the Pacific. Beginnings of help for local hospitals to create tech-based economic opportunities in healthcare and related fields.

Influential Factors: List the factors you believe will influence your ability to impact the problem or opportunity. (Things that support success and barriers to success.)

Support Success:

1. Strong desire on the part of stakeholders to execute a plan to provide wet laboratory space in Kakaako adjacent to JABSOM and CRCH.
2. Support from the administration and legislature for innovation infrastructure like wet laboratory space for life sciences and biotechnology industries.
3. Access to consultants to conduct due diligence and assess risks; funding appropriation in Act 150 to support these activities.
4. Private/public sectors analyses of demand for wet laboratory space is favorable. Continued growth in wet laboratory space beyond current plans under the lease.
5. Strong interest from life science companies to sublease space evidenced by signed Letters of Intent by each company.
6. Ability to leverage existing assets (statewide incubation network program and facilities) to maintain occupancy levels.
7. Excellent experience developing and operating incubation and innovation centers (since 1987).
8. Potential access to existing New Markets Tax Credits that will provide nominal lease rent relief.
9. Willingness on the part of the master Lessor and developers to create a win-win situation with the state.
10. Support from administration and legislature for university, institutional, and private research. Continued overall growth of research grants and activities by the University of Hawaii.
11. Act 221/215 and Sections 235-110.9, 235-7.3, 235-9.5 providing incentives for IP.
12. Broad language in Act 150 giving the state an option to proceed to negotiate for wet laboratory space from other developer(s) in Kakaako.
13 Maui High Performance Computing Center under management by the University of Hawaii has plans to "link" to Kakaako with capability to perform the massive numbers-crunching that much biotech requires these days (bioinformatics).

Barriers to Success:

1. Lack of sufficient funds or appropriations to cover initial obligation under the lease required by Budget & Finance, prohibiting HTDC from entering into a lease with the developers.
2. Unforeseen negative economic conditions prohibiting new projects from moving forward.
3. Inability of landowner and developers to reach agreement on development and master lease.
4. Inability of landowner, developers, and the state to satisfactorily allocate risks.
5. Inability of developers and the state to reach agreement on lease language.
6. Inability of developers and state's community development agency to reach agreement on permits and other issues (e.g., parking).
7. Unanticipated higher bid construction or development costs making the final sub-lessee rents unaffordable.
8. Higher vacancies than anticipated creating a negative funding situation thereby invoking early cancellation provision in the lease between the state and the developers.

9. Negative view of Hawaii as a biotech or science and technology environment – traditional view as sand and surf.
10. Traditional perception that a major institutions like the National Institutes of Health in Maryland or the National Science Foundation in Massachusetts are necessary to "anchor" and spin off research and commercial activities.

Strategies: List the general successful strategies or "best practices" that have helped other programs achieve the kind of results your program promises.

Typically projects will face barriers to success and no one strategy works for all communities, but involvement of stakeholders and early involvement by key state departments in the review and approval process will result in a project at acceptable risk levels.

There are several scenarios for creating wet laboratories in a community. There are traditional and non-traditional means of building wet laboratories and they include (1) land contribution, subordination; (2) infrastructure grants, civic investments, land loans, etc; (3) direct and indirect equity via grants, investments, appreciated land values; contribution of development fees, tenant improvement grants and investments; (4) debt/loans such and first and second mortgages, conventional interest rates, reduced interest rates (tax exempt), delayed or scaled debt service, cash flow debt service, and tax increment financing; and (5) credit enhancements such as lead tenant, master lease, guarantee, letter of credit, and residual value insurance. The Kakaako project will use the master lease and "better" credit rating of the state to assist with lowering financing costs.

Professional and trade associations such as the Association of University Research Parks (AURP), States Science and Technology Institute (SSTI), National Business Incubation Association (NBIA), BIO International, provide various strategies and scenarios to initiate development of wet laboratories. In January 2005, HTDC with approval from AURP initiated and organized a conference titled "Research Parks 101" at Hyatt Regency. The conference sponsored by UH JABSOM, HCDA, HSDC, Kamehameha Schools Bishop Estate, Leo A. Daly, Townsend Capital, LLC, and Goodsill Anderson Quinn & Stifel, focused on the integration of a research park into an effective biotechnology strategy for the State of Hawaii. Speakers such as Vernon George (George Henry George Partners), Mike Bowman (Delaware Technology Park and Council on Competitiveness), Bruce Wright (University of Arizona Science and Technology Park), Dr. Ed Cadman (Dean, UH JABSOM), Norma Grace (President of AURP and Vice Chancellor for Technology and Economic Development at University of New Orleans), Charles Day Dilks (Developer for Science City in Philadelphia), spoke about defining and implementing the optimum university role in biotech strategy; successful research park marketing: what the international experience tells us; a partnering strategy to enhance the research and financial resources supporting the park; creative financing of research park buildings to optimize public investment; and finally what it all means for Kakaako. This conference was one catalyst to planting the seed for collaboration among stakeholders and the beginning of potential solutions for financing research facilities in Kakaako.

The state has experience developing and operating these projects from the perspective of the government sector. HTDC, as a government entity administratively attached to DBEDT and created by the legislature with a separate governing board of directors to facilitate the growth and development of the commercial high technology industry, has developed projects using government lower cost debt (bonds). These projects include Hawaii's first incubator, Kaimuki Technology Enterprise Center, (Hawaiian Telephone Company as landlord contributed no-rent space, state CIP for renovations); Hawaii Ocean Science and Technology Park with GOB on state land (547 acres); Manoa Innovation Center with GOB on university land (3.1 acres), Maui Research and Technology Center with GOB on private land transferred to the state (5.1 acres), Hawaii Innovation Center at Hilo (developed by UHH using state CIP/HTDC contract on land donated by the Foundation of the University of Hawaii), Waimea Techno Tourism Center (developed by KEDB with state CIP/HTDC contract on land owned by a non-profit entity).

To summarize, the best practices strategy is to pick whichever way makes the best sense for your community and get started. Stakeholders and a champion (e.g., Hawaii Science and Technology Council, Hawaii Innovation Council) are critical for keeping open lines of communication, maintaining momentum, reaching consensus, and ensuring that long term economic gains remain the primary focus. We are nurturing an industry and investments are necessary in the early stages. The landowner, a major economic player in the state, has the potential to provide critical resources and investments. Leveraging all the above resources is the key strategy.

Assumptions: State the assumptions behind *how* and *why* the change strategies you have identified will work.

The state's ability to fund large construction projects such as wet laboratories that typically cost 2.5 to 3-plus times more than traditional office building space and for private activity users (as opposed to public users) is limited. Perhaps one maybe two facilities may be built over a period of time using state financing, but more than one or two facilities is needed to create the necessary critical mass involved in research and development, and commercialization. Furthermore, such a large project with high construction costs would be competing for limited funding against affordable housing, transportation, educational facilities and other deserving public construction projects. Therefore, given local conditions there are limited options available to develop wet laboratories using traditional state financing vehicles.

Such constraints means states (like Hawaii) pursuing technology based economic development or innovation infrastructure and economy as a means of attractive and sustainable growth, must look at other methods of financing wet laboratories. If they are to survive the 21st century challenges of a global economy and provide skilled good paying jobs (as opposed to service jobs at half the income), new and creative solutions to growing tech industries and wet laboratories are needed.

While there is interest from other developers to develop and finance wet laboratories, this is the only current proposal that limits the state exposure to a lease for 10-years. Furthermore, the lease will provide after the 2nd year and under certain specified conditions and precedents that the lease is cancellable due to a lack of state funding for lease rental payments. Estimated lease rents are subject to final costs of the project; however, current estimates are $4.5 million annually.

To summarize, given the lack of state financing options for large construction projects such as wet laboratories, higher than typical construction costs in Hawaii and for wet laboratories with extensive mechanical and electrical systems, lack of other state assets or resources to leverage, the early nurturing/high investment stages of commercial biotechnology and life sciences industries, biotechnology companies inability to commit to long term leases instead using their resources for research and product development, the experience of other states using a similar model for development of wet laboratory space, and potential reduced financial risk to the state, the strategy may be the only alternative currently available.

II. PROGRAM IMPLEMENTATION

Resources: Describe the resources or influential factors available to support your program.

1. Act 150 Appropriations
2. Stakeholders (land owner, developers, life science companies, local life sciences council membership, administration, legislature, business community, research institutions, universities, educational institutions, tech industry).

3. DBEDT, HTDC, and HTIC
4. Existing Statewide Incubation Network Program
5. Existing Incubation and Innovation Facilities (Manoa Innovation Center, Maui Research & Technology Park, Hawaii Innovation Center at Hilo, Waimea Techno-Tourism Center, Natural Energy Laboratory of Hawaii, Center of Excellence in Research and Ocean Sciences, University of Hawaii at Hilo Research Park, JABSOM, CRCH, and UH related research institutions).
6. Consultants and Contractors
7. Professional organizations involved with development and operation of research parks.

Activities: Describe each of the activities you plan to conduct within your program.

1. Coordinate with and communicate status with stakeholders
2. Risk analysis and negotiations.
3. Marketing and leasing strategies.
4. Enter into contracts for due diligence and assistance from HTIC.
5. Draft project operating policies and procedures; establish records and files.
6. Maintain a record of activities.

Outputs: For each program activity, identify what outputs you aim to produce

1. Meetings, presentations, reports.
2. Lease and subleases.
3. Marketing Plan.
4. Contracts with consultants and between HTDC and HTIC to assist with operations of center.
5. Incubation Program Plan.
6. Operations Manual, Central Files.
7. Annual Report to the Legislature (and stakeholders), as required by Act 150

Outcomes: Identify the short-term (0-2 years) and long-term (2-6 years) outcomes you expect to achieve.

0-2 Years:
1. Completed negotiations allow developers to proceed with financing and construction.
2. Executed subleases with biotech companies for total leased square footage from developers.
3. Communication with stakeholders on the progress to date.

2-6 Years:
1. Occupancy and satisfied tech companies (sub-lessees) with new wet laboratories.
2. Continued communication with stakeholders on progress of collaborative efforts relative to short and long term goals.
3. Incubation program in operation and sub-lessees networked into research community.
4. Marketing plan in action increasing potential sub-lessees and creating demand for more wet laboratories.

Impact: Describe the lasting impact you anticipate.

Assisted the growth and development of biotechnology and life sciences industries in Hawaii, which will

bring about increased synergy and growth of related research, companies, technologies, quality jobs, educational opportunities, and more.

III. PROGRAM EVALUATION

Focus Area: From your program logic model, list the components of the most important aspects of your program.

1. Lease negotiation: Analysis and allocation of risks.
2. Convening Stakeholders: Commitment to nurture and invest in early stages of industry development, follow project implementation.
3. Establishing tenant pipeline to reduce immediate financial risk to the State.

Audience: Identify the key audiences for each focus area. Who has an interest in your program?

Lease negotiation: HTDC Board of Directors (includes DBEDT Director as a member), Budget & Finance Director.
Stakeholders: Administration, Legislature, Landowner, Developers, Technology Companies (sub-lessees), Industry and Innovation Councils, research and academic institutions, business community.

Questions: For each focus area and audience, list the questions they may have about your program.

HTDC Board and Budget & Finance Director:
1. Have all risks been identified and mitigated satisfactorily?
2. Who benefits and what are the financial benefits?
3. How does this contribute to the state's tech-based economic goals short term and long term?
4. What were the total state resources utilized and was it worth the investment?
5. Would we do this again?

Stakeholders:
1. Is what was promised being achieved? (Did we receive wet laboratory space at satisfactory rates and within reach of tech companies?)
2. Did the master lease actually reduce sub-lessees overhead cost (lease rent)?
3. Did the land owner and developers receive a fair return on investment? Short and long term.
4. What other benefits (non-financial) were gained?
5. Did the community benefit from this investment? Was there perceived improvement?

Information Use: For each audience and question you have identified, identify the ways you will use the evaluation information.

HTDC Board and Budget & Finance Director:
1. Programming decisions to determine future support and investment.
2. Increased knowledge about the effectiveness of new approaches to solve problems.
3. Greater understanding of government's role in similar projects.

Stakeholders:
1. Accountability and improvement of future funding and investments.
2. To assess increases in value both short and long term.
3. To determine satisfaction among supporters and community at large.

Indicators: Describe what information can be collected that would convey the status of your program.

1. Data collected from questionnaires and surveys of stakeholders.
2. Financial analysis of operations (first two years of lease term).
3. Number of new jobs created and current jobs retained (longer term).
4. Number and dollar volume of new research opportunities and expanded ones (longer term).
5. Annual reports on the impact to the research community and Kakaako.

IV. ALIGNMENT

How is your program linked to DBEDT's six strategic objectives?		
1.	**no**	Workforce Housing
2.	**yes**	Workforce Development **Skilled workforce will be required to meet jobs created.**
3.	**yes**	"Energy For Tomorrow" **An adjacent seawater energy conversion facility will provide electricity.**
4.	**yes**	"Global Links/Export of Goods and Services" **Synergy with Asian countries and US Mainland will naturally occur as research activities and opportunities increase.**
5.	**yes**	The Creation Of An "Innovation Infrastructure" **Provide wet laboratory, a physical infrastructure that will allow the growth of the innovation economy and assist the life sciences cluster gain critical mass.**
6.	**yes**	Improve Hawaii's Small Business Environment **The synergism, collaboration, cross-pollination that comes from collocating university and institutional research activities with private research will naturally create technology spin-offs or small businesses**

If your program is not linked to any of the six objectives, explain why it is still important.