

NEW ORLEANS MEDICAL DISTRICT ECONOMIC DEVELOPMENT STRATEGY

Issue Paper:
Leadership and Management Strategy

February 11, 2006

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Strategies for the Global Knowledge Economy

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(This document is one of a series of four interim work papers prepared for the purpose of supporting stakeholder dialogue in Planning Workshops. It is not a Strategic Plan or formal report.)

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INTRODUCTION

This is a an interim *Issue Paper*, prepared as a means to consolidate background information and provide material for review meetings in February 2007 on the subject of how to organize stakeholders to conduct the functions and tasks required to enact the many diverse activities embodied in the *Economic Development Strategy* for New Orleans Medical District.

This *Issue Paper* is a companion to three others that also were produced to support decision-making:

- Innovation System Strategy
- Development Strategy
- Market Strategy.

This *Issue Paper* is organized into sections as follows:

- **Vision and Goals.** New draft based on the group dialogue on January 30 (St. Louis Leadership / Management Workshop)
- **History.** Summary information on entities and prior planning. Details are provided in exhibits.
- **Organizations and Stakeholders Today.** List of organizations and special purpose entities engaged today in the Medical District strategy planning
- **Peer Practices.** Short discussion of development districts and selected peers. Details are provided in exhibits.
- **Functions to be Carried Out.** Summary of the range of tasks, functions, and activities the *Economic Development Strategy* entails. Details are provided in exhibits.
- **Leadership and Management Scenarios.** Hypothetical scenarios for organization, presented as material for discussion with/by stakeholders in the February meetings
- **Exhibits.** Background information on New Orleans entities and peers, plus a detailed list of *Draft Action Strategies* from earlier *Issue Papers*.

The discussion meetings on February 14 through 16, will center on the two sections:

- Functions to be Carried Out
- Leadership and Management Scenarios

VISION, GOALS, AND STAKEHOLDERS

VISION STATEMENT

Build a globally competitive Innovation Economy for the New Orleans region by using regional knowledge institutions to:

- Expand biomedical research
- Grow and attract entrepreneurial companies
- Create a vibrant urban community.

EXPLANATION OF THE VISION

The New Orleans region will:

- Find and use new treatments and cures for human diseases
- Create good jobs and wealth for citizens
- Enhance the region’s higher education and health care institutions
- Establish City of New Orleans as a great, diverse, and successful American city—in a region of many other successful smaller communities.

GOALS

To achieve the vision, the two major goals are:

- ***Biosciences Growth***—from basic research through commercial applications
- ***Urban Redevelopment***—from mixed urban uses to improvement of the character of the physical environment.

BIOSCIENCES GROWTH	URBAN REDEVELOPMENT
INSTITUTIONS <i>(Education, Research, Clinical, Workforce)</i>	MIXED USE DEVELOPMENT <i>(Urban Community)</i>
INDUSTRY <i>(Entrepreneurial to Mature)</i>	ENVIRONMENT ENHANCEMENT <i>(Attractive Urban Place)</i>

STAKEHOLDERS AND GEOGRAPHY

The true stakeholders of this enterprise are the citizens of Greater New Orleans—present and future. It is for the benefit of the people of the city and region that this Economic Development Strategy is created.

Indirectly, stakeholder organizations are all those charged collectively with achievement of the Vision. This includes all education, health care, business, government, and community organizations, agencies, and institutions whose knowledge, skills, and resources are needed in the complex, long-range effort.

HISTORY

This section provides a highly summarized history of formal initiatives to launch the strategy for what now is called New Orleans Medical District. More details are provided as Exhibit 1. A comparative analysis prepared by Adams and Reese, LLP is provided as Exhibit 2.

HIGHER EDUCATION AUTHORITY OF LOUISIANA (HEAL)

The first organizational entity created for the purpose of supporting and enhancing medical institutions in New Orleans was the Health Education Authority of Louisiana (HEAL), initially created by statute in 1968.

HEAL has the largest boundary definition of the various entities—essentially a 10 mile radius of Charity Hospital. With the usual powers to acquire and dispose of property, finance with debt obligations and other means, and create and implement a Master Plan, the focus of this entity differed from later ones only in that it was directly focused on academic health sciences education, health care, and biomedical research. It did not directly include a focus on inducing creation of a private biosciences industry surrounding the medical institutions. This entity is still at least technically in existence.

LOUISIANA BIOMEDICAL RESEARCH AND DEVELOPMENT PARK (LBRDP) AND NEW ORLEANS REGIONAL MEDICAL COMPLEX (NORMC)

The second initiative, in 1991, was styled as a **research park** and now included the purpose of improving the State's economy, creating jobs, etc. The Louisiana Biomedical Research and Development Park (LBRDP, or the Park) was initially established by Act 1023 of the 1991 Louisiana legislative session. Its purpose was to improve the quality of life for citizens of Louisiana by improving health care, creating jobs, and ultimately to improve the State's overall economy by encouraging outside investment in research activities in New Orleans and the state. The Park was to accomplish these goals by providing quality facilities for the delivery of health care services, ongoing medical research and development, manufacturing goods useful to health care delivery and related research and development activities, and related support services and concerns.

1992 Comprehensive Plan

The Louisiana Biomedical Research and Development Park Commission (the Commission) submitted a **Comprehensive Plan** to the legislature in December, 1992. This **Comprehensive Plan** addressed the following areas:

1. The organization and governing structure for each health care facility in the Park
2. The role that each facility would assume in the Park
3. Short-range and long-range capital and operational cost needs and a plan to identify them on a continuing basis
4. The economic impact of the Park on New Orleans and the state
5. Clinical education needs of health personnel in the Park.

Creation of New Orleans Regional Medical Complex (NOrMC)

The Commission established the New Orleans Medical Complex, Inc. (NOrMC) a 501(c)(3) not-for-profit corporation as the governing entity for the Park. NOrMC's Board of Directors includes representatives of the institutions and various public and private local organizations.

During the ten years that followed establishment of the Commission and the 1992 Comprehensive Plan, both external and internal factors contributed to a lack of implementation of most aspects of the Plan. Most importantly, the legislation that formed the Commission was not accompanied by the necessary appropriations to fund initial construction and marketing efforts.

The 2002 Plan Update

The Louisiana Biomedical Research and Development Park was re-enacted by Act 1183 of the 2001 Louisiana Legislative Session, and a new or updated ***Comprehensive Plan*** was submitted in March 2002. This update of the ***Comprehensive Plan*** recognized that NOrMC already had been operating for several years. It recognized the successful management and completion of several projects, including the thermal energy project and participation in the pedestrian walkway project across Claiborne Avenue. NOrMC had the authority to enter into lease and operational agreements and to serve as the organizational structure to manage the implementation of the Park. The ***Plan*** recognized that creation of the Park was essential to development of biomedical research as an engine for economic development and recognized the need for coordination between the Park and other initiatives whose purposes also further biomedical research or the enhancement of economic development.

The ***2002 Comprehensive Plan*** recommended utilizing the governing structure of NOrMC comprised of essentially the same operational entities as the BRDP Commission and other emerging initiatives like the BioInnovation Center to be incorporated within the Louisiana Biomedical Research and Development Park. The recommended new name for NOrMC as the governing body was the ***Biomedical Research and Development Complex of New Orleans, Inc.*** The organizational structure consisted of the NOrMC Board of Directors, a small executive committee, the chairman, vice chairman, and three Board members, and an operations/finance committee of designated senior staff from the participating and member institutions.

The organization chart in this ***Plan*** shows the Biomedical Research and Development Park as an entity under the operations/finance committee. Its task was to establish the identity of the geographic area and functions and to be the land/buildings/economic development branch of the Biomedical Research and Development Complex of New Orleans. Other operating entities under the operations/finance committee include the Gene Therapy Consortium and the Clinical Research Foundation of New Orleans. The Gene Therapy Consortium is a cooperative research relationship between LSU and Tulane and is shown on the organizational chart with a dashed line to recognize the institutional relationship shared with NOrMC and the potential for sharing operational resources. The BioInnovation Center is shown under the Biomedical Research and Development Park, and noted as the first building with responsibility for promoting and

establishing new business opportunities in the Park. Now, both the BioInnovation Center and the Gene Therapy Research Consortium are separate non-profit entities.

The 2002 *Plan* also provided details of “roles and responsibilities” of various sponsor entities and provided a framework for how functions would be performed, including recommendations for staffing (employees and contributed services).

GREATER NEW ORLEANS BIOSCIENCES ECONOMIC DEVELOPMENT DISTRICT, 2005 (GNOBEDD)

More recently, the legislature created the Greater New Orleans Biosciences Economic Development District (GNOBEDD). The purpose of GNOBEDD includes, among other things, facilitation of the creation of high-paying jobs by assisting in the development of biomedical facilities and programs.

Like HEAL, GNOBEDD, as a ***development district***, has certain authorities of a state-created political subdivision, including the authority to tax, borrow, impose impact fees, and implement a master plan. In this respect, GNOBEDD is similar to many other district entities of this type, including ***medical districts, business improvement districts, and redevelopment districts***,—in Louisiana and in many other jurisdictions. In this legislation, the legislature also created new expanded boundaries and a new management structure.

The legislation clearly states that no medical or educational institutions within the District are affected by the provisions of the bill or by decisions of the Medical District Board. It also places the City government in this category. The board’s powers, therefore, extend only over the lands not owned by the universities, medical centers or the City. The legislation provides the District with the power to issue tax-exempt bonds. The District also has the power to levy an increment on ***ad valorem*** real estate taxes within its borders, but it requires New Orleans City Council approval as well as Orleans Parish voter approval through a general referendum.

Board of Commissioners

This new management structure includes a Board of Commissioners of 13, with representation of certain institutions and appointments by the Governor and Mayor, and by the Secretary, Department of Economic Development.

Advisory Committee

The legislation also includes the formation of an Advisory Committee to the board made up of other medical and educational and business/civic institutions within Orleans Parish not represented on the Board.

This legislation was the subject of considerable debate among stakeholders. LSU, in particular, had significant concerns about it. To the present, the Board has not been appointed and the entity has not been activated.

A more detailed comparison of HEAL, NORMC, and GNOBEDD purposes, board structures, and powers, prepared by Adams and Reese, LLP, is provided as Exhibit 2.

SUMMARY OF NORMC PURPOSES AND GNOBEDD LEGISLATED POWERS AND OPPORTUNITIES

The purposes of NORMC are included in Article 3 of its Articles of Incorporation dated October 11, 1991. This Article states that NORMC is organized to help, assist, and encourage the Medical District and identifies the boundaries of Loyola, Iberville, North Galvez and South Galvez, and Pontchartrain Expressway. There are no “hard” powers.

The GNOBEDD legislation, however, provides numerous hard powers. It also specifically states several clarifications and exceptions to those powers. A summary of the selected powers and limitations follows:

1. Will not supercede the authority of the city or medical institutions; will not adversely affect revenues of primary partners. (page 2)
2. The district and any subdistrict created by the district shall not be required to pay any taxes. (page 7)
3. To plan, develop, operate, and maintain activities **and land uses** (emphasis added) to foster creation of new jobs. (page 8)
4. To incur debt and issue general obligation bonds and to issue revenue bonds. (page 8)
5. Has the authority to present an application to the city for purposes provided in the Louisiana Enterprise Zone. (page 9)
6. May designate one or more areas within or without the district as a separate subdistrict or as an enlargement of the original district. (page 10)
7. To collect funds – federal, state, or local grants – and empowered to serve as the beneficiary of a public trust. (page 11)
8. To develop and implement a master plan for the district related to biosciences, but in coordination with the Louisiana Board of Regents with respect to public higher educational institutions. (page 12)
9. The district and the city “shall enter into an agreement to provide funds to the district by the city in exchange for the district performing its duties under this chapter.” (The city will budget these funds annually, subject appropriation by the city council.” (page 13)
10. The district may levy impact fees for the development of property within the district based on rules of the district relative thereto, subject to approval of city council. (page 13)
11. “As part of any negotiated transaction involving the district and a private entity, and in the event the private entity advances project costs to be determined to be reimbursed by the district, the district may execute a cooperative endeavor agreement, committing a percentage of new tax receipts to be shared to reimburse such advances. (page 13)
12. The district may charge fees for the use and for service furnished by a project of the district and may contract any entity in respect thereto. (page 13)
13. The district may request city council to exercise the power of taxation, including the levy of ad valorem taxes on behalf of the district provided the levy “provided the levy thereof is approved by the majority of qualified electors residing and voting in the Parish of Orleans. (page 14)
14. The district may issues bonds to fund biosciences through acquisition of land and buildings or construction of buildings. Security for the district bonds or cooperative endeavor obligations may include taxes, revenues from projects, and other sources. (page 17)
15. And the district is exempt from all state and political subdivision tax, and shall not be required to pay recording fee, transfer tax of any kind. Bonds are exempt from state and local tax. (page 21)

ORGANIZATIONS AND STAKEHOLDERS TODAY

Altogether, as is the case with complex urban strategies, there are many entities that are directly or indirectly interested participants in the Medical District strategy. Previous versions of organization were roughly similar in providing for representation of institutional, public sector, and private sector representation.

In alphabetical order within categories, the stakeholders are:

ACADEMIC, HEALTH SCIENCES, AND HEALTH CARE INSTITUTIONS

- Children’s Hospital—New Orleans
- Delgado Community College
- Dillard University
- LSU Health Sciences Center—New Orleans
- East Jefferson General Hospital
- Medical Center of Louisiana—New Orleans
- Ochsner Health System
- Tulane University Health Sciences Center
- Tulane University Hospital and Clinic
- University of New Orleans
- Southeast Louisiana Veterans Health Care System
- Southern University of New Orleans
- Xavier University of Louisiana.

LOCAL/REGIONAL PLANNING, ECONOMIC DEVELOPMENT, AND BUSINESS COMMUNITY ENTITIES

- City of New Orleans
- Downtown Development District of New Orleans (DDD)
- Greater New Orleans, Inc. (GNO)
- New Orleans Chamber of Commerce
- Black Economic Development Council
- The New Orleans Business Council
- Regional Planning Commission (RPC)

STATE OF LOUISIANA

- Louisiana Department of Economic Development
- Louisiana Recovery Authority
- Louisiana State University Board of Supervisors and System Office
- Office of the Governor
- State Legislature

COMMUNITY ORGANIZATIONS

- Baptist Community Ministries Foundation
- Greater New Orleans Foundation
- Idea Village
- Other community-based organizations

SPECIAL PURPOSE RELATED ENTITIES

Leaving aside HEAL and the proposed statutory GNOBEDD entity for the moment, there are currently four incorporated special purpose entities.

- New Orleans Medical Complex, Inc. (NOOrMC)
- New Orleans BioInnovation Center, Inc. (NOBio)
- Louisiana Gene Therapy Research Consortium, Inc. (LGTRC)
- Louisiana Cancer Research Center, Inc. (LCRC).

Exhibit 3 provides a compilation of current board members of the four special purpose entities.

The LGTRC and the LCRC are included in Exhibit 3 for information purposes, although they are programmatically-focused research organizations/centers. Their separate incorporation and the make-up of their boards are not directly germane to the discussion of overall leadership and management of tasks and functions to develop the Medical District

The board membership comparison in Exhibit 3 suggests that:

- Certain individuals are serving on several boards with related functions
- Ochsner Health System seems to not be represented in any of these organizations
- There might be opportunities to improve the mix of representation, to achieve improved skills mix and coordination and for greater efficiency.
- If GNOBEDD were activated, many of the same institutions and individuals would likely comprise its Board of Commissioners.

PEER PRACTICES

DISTRICT DEVELOPMENT OR IMPROVEMENT ENTITIES

Some defined urban districts are **service enhancement entities** that carry out capital improvements and manage quality of life issues in specific neighborhoods. They have become common mechanisms in large and small cities alike. They are variously called Business Improvement Districts (BIDs), Special Service Districts (SSDs), Public Improvement Districts (PIDs), Business Improvement Areas (BIAs), and Local Improvement Districts (LIDs). These special districts are almost always funded by mandatory assessments on properties within the district and with public sector and city grants. A few examples:

- West Philadelphia's University City District is funded by voluntary contributions, as part of the University of Pennsylvania's long-term and ongoing activities to improve the quality of life in University City.
- There is a district in Detroit—the New Center District—that is funded by voluntary contributions, largely from the Henry Ford Health System.
- Massachusetts has established a district improvement financing program (DIF, we presume), an economic development tool that provides cities with a means to fund infrastructure improvements to attract business growth and housing development. DIF allows cities to fund capital improvements using bond financing that are funded by future real estate tax increases (similar to tax increment financing strategies).
- Alabama has formed special improvement districts, capital cooperative districts, business improvement districts, and tax increment districts for similar purposes.
- Philadelphia's Center City District is a business improvement district supported by mandatory assessments on real estate and is governed by a private-sector board. The district was founded in 1990 and is extremely successful. In fact, many in Center City believe that the improvements and quality of life management carried out by the District have been central to the rebirth of downtown Philadelphia.

A brief review of similar districts on the internet confirms that New Orleans' DDD is among the "best practices" leaders.

New Orleans Medical District is one of these. In fact, the New Orleans Downtown Development District was established in 1974 as the country's first assessment-based business improvement district and a city referendum in 2001 extended the DDD's lifespan through year 2030. This referendum clearly endorsed the DDD's mission to ***"develop and sustain a vibrant downtown New Orleans in which to live, work and play by ensuring that downtown is clean and safe, and by acting as a catalyst for economic development."***

The statutes that established entities in New Orleans, up to and including the Greater New Orleans Biosciences Economic Development District, include similar purposes and powers to those created elsewhere for similar purposes—including the New Orleans Downtown Development District and several peer bioscience initiatives in other parts of the US.

MISSION-FOCUSED DEVELOPMENT DISTRICTS

There are some improvement or service districts that have an additional major focus on cultivation of a particular industry or technology base. In these districts, institutions are primary players or sponsors. Often, these kinds of districts engage in more active development, rather than merely inducing private development.

Peers for New Orleans Medical District include both urban redevelopment districts and university research parks. The consultant team selected a limited sample of other urban districts and urban research park developments for comparison. All but one (Cleveland) is primarily focused on biosciences. They include:

- CORTEX and Center for Emerging Technologies, St. Louis
- Illinois Medical District, Chicago
- Memphis BioWorks (Foundation), Memphis
- University Circle, Inc., Cleveland
- University City Science Center, Philadelphia¹

A matrix summary of information about these peer initiatives is provided as Exhibit 4. More detailed information on each is provided as Exhibit 5.

Overall, there is no one model that fits the New Orleans situation. Rather, there are several different leadership and management models. Governing boards vary from very large (Cleveland) to very small (St. Louis). Large boards are considered to be useful for inclusion of various interest groups but not useful for transacting business.

Use of development districts that derive certain authorities to carry out development are common—e.g. Chicago, St. Louis—but not ubiquitous. For example, university research parks that are developed on greenfield sites owned entirely by the institution do not need the district structure—although they sometimes have required special zoning statutes to permit mixed-use development.

Generally, in cases where there is a statutory authority, there is also a not-for-profit sponsor organization. In addition, almost always, there are *for-profit* related corporations for certain real estate functions, including active real estate development / management entities and single-asset LLC entities to own individual facility assets.

For example, in St. Louis, two not-for-profit entities are charged with the St. Louis midtown life sciences strategy—Center for Emerging Technologies, Inc. and CORTEX, Inc. Both of these non-profits also have related for-profit entities through which they accomplish their land and real estate transactions. CORTEX, in addition, has a city-granted redevelopment district, by which it was granted public powers to control land use, expropriate, and impose special impact fees.

¹ University City Science Center is not itself a development district in the same formal sense as others. It is an “urban research park” and is in or adjacent to the University City district referenced above.

FUNCTIONS TO BE CARRIED OUT

This is a one-page summary of the nature of functions and tasks.

A more specific list of Action Strategies, in draft form, from related issue papers, is provided as Exhibit 6. These will be refined and developed in the final Economic Development Strategy, as strategies to be carried out.

However, the specific Action Strategies will fall into the generic functions described on this page.

The work of developing the Medical District falls into two broad types of activities—Programs and Physical Development—each with two major sub-categories. Not all stakeholders are best suited to undertaking all the tasks. Organization solutions for **who** must derive from **what** the tasks are and **how** they must be carried out. Scenarios below derive from the work to be done.

PROGRAMS

1. Institutional Development—Individual and Joint

- Ongoing development of programs and facilities of the individual institutions
- Collaborative research programs and facilities among the institutions
- Intellectual policy and innovation/technology development
- Political, community, and funding support for institutional priorities

2. Innovation Strategy

- Research and technology niche strategies
- Formation and management of various programs to support incubation and development of entrepreneurs and entrepreneurial partnerships
- Formation and management of seed capital fund
- Management of incubation facilities
- Workforce development programs, e.g. training and education degree/certificate programs; internships; career exploration; early education science support programs, adult training, etc.
- Organization of university “access” for bioscience companies (e.g. amenities; access to specialized labs and equipment; support with grant-writing; facilitation of student and graduate recruitment, etc.
- Community relations and interactions; political liaison activities
- Market positioning and promotion of the District (overall) beyond the region.

PHYSICAL DEVELOPMENT

3. Land and Infrastructure

- Land acquisition and land-banking (e.g. for properties to develop for commercial and mixed use; and possible land-banking for institutional uses)
- Infrastructure development and site improvements (e.g. telecommunications, landscaping, signage, street improvements, etc.)
- Financing of land acquisition and infrastructure development
- Site support services—security, parking, landscape maintenance, traffic, etc.

4. Real Estate Development, Marketing, and Sales

- Development of primary commercial facilities (e.g. office and lab buildings for R&D and business uses)
- Organization of and inducements for mixed-use development (e.g. solicitation of housing developers, retail, etc.)
- Ongoing financing, operations, transactions, and development partnerships
- Specific promotion and sales focused on tenant prospects, including prospect identification, tracking and management
- Asset management for sponsor-developed properties (e.g. NOBio facility).

LEADERSHIP AND MANAGEMENT SCENARIOS

Creating and sustaining a long-range effort in economic development is, in any case, a demanding and complex undertaking. In this case, Katrina has brought many additional and serious issues that the New Orleans biomedical community must consider and resolve. In spite of this, there is significant planning underway and the renewed concept of a Medical District has achieved a growing momentum. Additional funding, development activities, and marketing activities will be required, to complement current efforts.

What is needed immediately is a construct to focus and expand current efforts in such a way that does not distract from the tasks at hand, that does not diminish momentum, and that allows the current planning to conclude and be implemented.

FRAMEWORK AND YARDSTICKS FOR EVALUATION OF SCENARIOS

Toward the goal of creating a workable framework for leadership and management that will support actions and accomplishment, possible scenarios are provided here. They are not conclusions. They are scenarios for review and discussion.

Yardsticks by which scenarios were developed and should be evaluated are:

- Establish as broad-based a coalition of stakeholders as possible
- Recognize that the functions involved are many and complex and diverse
- Recognize that stakeholder roles may be either *lead roles* or *support roles*, depending on the nature of any specific function or activity
- Assign lead responsibility for each major function to *some entity*, so that it is clear that someone is responsible for leading, while recognizing that others will also need to provide input and support
- Limit the number of formal entities involved—to simplify coordination

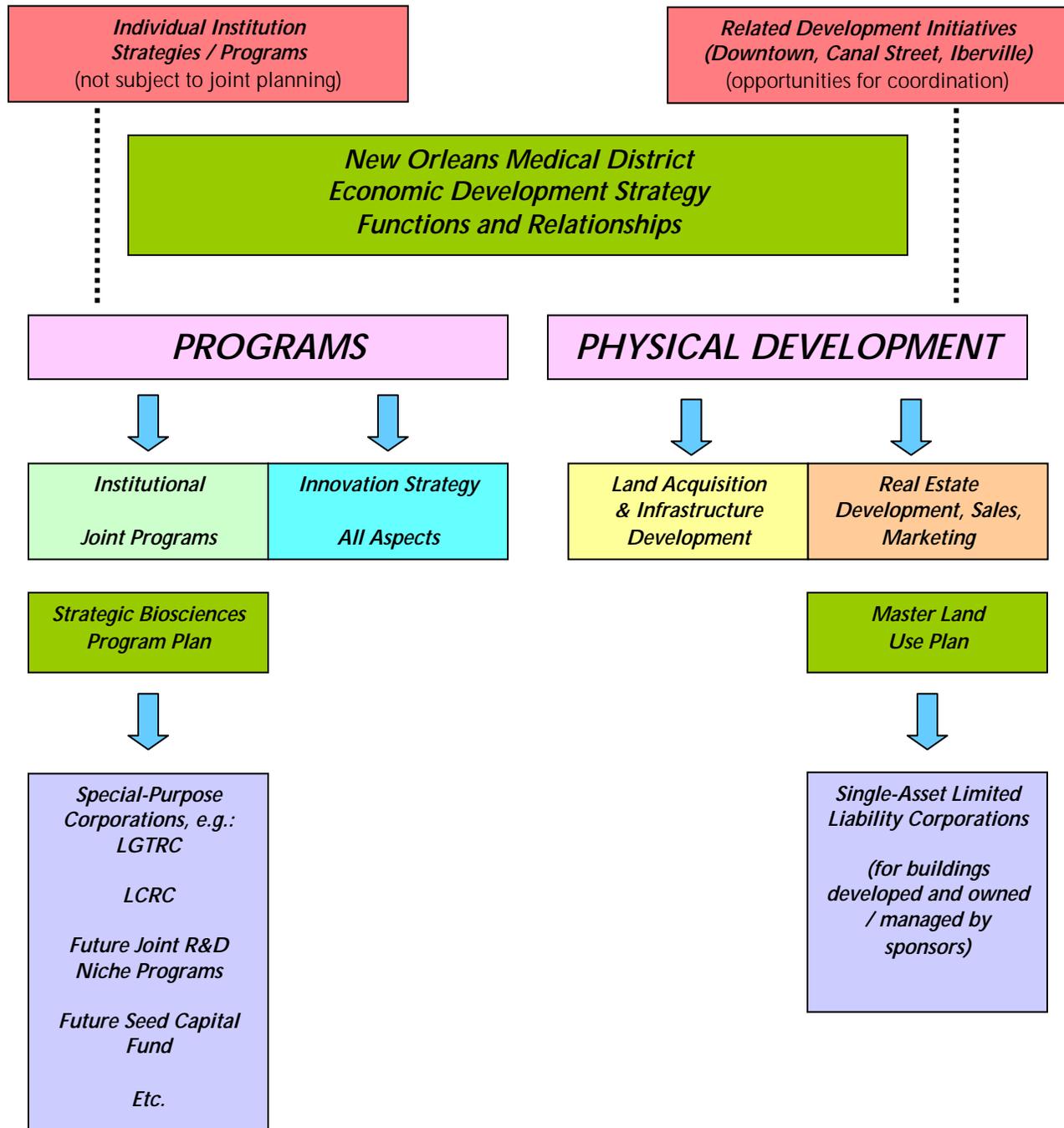
The consultants strongly urge Medical District stakeholders to address resolution of leadership and management solely from the pragmatic point of view of what work needs to be done and in full recognition that the comprehensive strategy involves a great variety of functions—not all of which are best suited to the primary skill sets of any particular stakeholder organization. That is why this is complex.

PROPOSED STRUCTURE—TWO ENTITIES WITH COORDINATION

As there are **PROGRAM** functions and **PHYSICAL DEVELOPMENT** functions—requiring very different skills—it seems reasonable to have two different entities leading these areas and coordinating closely with each other:

- One focused on **Programs (BIOSCIENCES GOAL)** and overall marketing/promotion of the Medical District
- One focused on **Physical Development (URBAN REDEVELOPMENT GOAL)**, including land acquisition, infrastructure improvements, and commercial (non-institutional) real estate development.

The graphic shows the functional differences and relationships.



PROGRAMS: INSTITUTIONAL PROGRAMS AND INNOVATION STRATEGY**Context and Assumptions**

- It is self-evident that each medical / academic institution will continue to develop its own institutional strategic plans and priorities. It also is the case that each institution will continue to manage its intellectual property (although closer collaboration on policy and processes is possible). None of this is within the purview of a jointly-sponsored organization.
- In addition, a locus of planning for joint programs—an important element of the future Medical District strategy—is needed.
 - The Medical District strategy already includes two special-purpose collaborative corporations—LGTRC and LCRC and the additional LSU-VA collaboration for a new hospital complex.
 - The Medical District strategy should include development of additional collaborative programs in the future. In our draft of *Action Strategies*, this is referred to as a Medical District *Strategic Biosciences Program Plan*. A program-focused entity in which all the institutions are represented could provide the forum for development of these programs and this *Plan*.
- There is a very wide variety of activities under *Innovation Strategy*—some of which are institution-based (research niches and intellectual property management) and some of which is business-oriented (venture capital) and some of which is both institution-dependent and business-dependent (workforce development). Therefore, both institutions and the business community need to work on elements of *Innovation Strategy*.
- Marketing, in the sense of broad promotion and branding of New Orleans Medical District (as opposed to more tactical real estate sales and leasing) is part of the *Programs* function. To this end, in any scenario for *Programs*, GNO, Inc. and the New Orleans Chamber and other business organizations will play a role in promotion—in and along with the lead *Programs* entity.
- Both NOrMC and NOBio are now (or will be) working on similar activities.

Possible PROGRAMS Scenarios to Consider

- **Scenario #1:** NOrMC is repurposed to focus much more specifically and more narrowly on *Institutional Joint Programs*. NOBio's purpose is broadened or clarified to include lead responsibility for every other aspect of *Innovation Strategy*—including workforce, business capital, technology development, marketing/promotion, etc. In this scenario, NOrMC's board would be reconfigured to include largely institutional representatives. NOBio's Board might be rebalanced to include adequate representation for all the programmatic and marketing activities needed. Close coordination is required.
- **Scenario #2:** As NOrMC and NOBio will be working in such close realms of activity, one could explore ways to blend them into one unified organization. A resulting single entity would be broadly responsible for ALL programmatic development relating to *Institutional Joint Programs* and *Innovation Strategy*. In this scenario, Board membership would be reconfigured to include the right skills and representation for all programmatic activities, with a well-defined committee system, including:
 - Research, Innovation, and Technology Development (Biosciences Plan)
 - Workforce
 - Business and Entrepreneurship Development
 - Marketing (overall promotion and branding of the Medical District).

PHYSICAL DEVELOPMENT: LAND ACQUISITION, INFRASTRUCTURE IMPROVEMENTS, AND (NON-INSTITUTIONAL) REAL ESTATE DEVELOPMENT

Context and Assumptions

- Apart from direct development of institutional facilities—sole and joint projects—this is not an arena in which the institutions are ideally suited to lead, although their input and support is important. This is a set of functions best led by those with business and economic development skills and experience—either present in an existing staff, or to be hired.
- These are the urban redevelopment activities for which having a defined district with certain authorities and powers within its boundaries is the common best practice.
- For the present, statutory powers to impose impact fees or taxes or to finance may not be expressly useful; however these will become important in the future. At present, the most important power or authority would be the right to control land uses in accordance with a Master Land Plan.
- One question to consider is whether any of the scenarios below is likely to be more favorable than other scenarios with respect to inducing and receiving state or federal funding for physical development needs such as infrastructure.
- This set of functions brings into question the issue of boundaries. These have been established differently in each prior legislation (HEAL, NOrMC, LBRDP, and GNOBEDD).
- NOrMC is not considered in the scenarios below as the lead organization for ***Physical Development***, as it should focus on what it does best—***Programs***. A different entity, with different board and staff skills should focus on ***Physical Development***.
- Although creation of an entirely new entity is a theoretical option, there already are several and it seems that a new entity would not be appropriate.

Possible PHYSICAL DEVELOPMENT Scenarios to Consider

- ***Scenario #1:*** The GNOBEDD entity is tasked with carrying out the land, infrastructure, and real estate development elements of the Medical District strategy and it would coordinate closely with the revamped NOrMC or NOrMC and NOBio organizations. Activating the GNOBEDD entity is likely to be disruptive at this time. However, it is needed eventually. To abandon this legislated solution entirely brings the risk of losing the attention and support of state legislators who have worked hard to support the Medical District. In addition, to never activate GNOBEDD is to risk loss of support from the business community.
- ***Scenario #2:*** The land, infrastructure and real estate development tasks for the Medical District are assigned to and assumed by the Downtown Development District of New Orleans (DDD). There is language in the Act that created the GNOBEDD district that seems to allow DDD to carry out its activities within the GNOBEDD boundaries, without requiring a formal change of boundary for the DDD. The DDD then would coordinate with the revamped NOrMC or NOrMC and NOBio organizations to coordinate ***Physical Development*** matters with ***Program*** matters. It presumably would work with GNO, Inc. on financing matters. The DDD also would work with the RPC on infrastructure and planning tasks. This scenario need not be a permanent solution; however, the DDD does have skills to carry out implementation of ***Physical Development*** activities.

- **Scenario #3:** No formal arrangement is made at present for assigning responsibility for the land, infrastructure, and non-institutional real estate development elements of the strategy. The New Orleans Regional Planning Commission (RPC) continues in its present informal authority to bring the stakeholders together, develop and begin to implement the **Master Land Plan** and to engage parties as possible, in execution of the physical development elements of the **Economic Development Strategy**. This scenario has the advantage of being least controversial and disruptive at present. Like Scenario #2, this may not be a viable permanent solution, but the RPC has skills that are applicable to undertaking at least some early implementation activities. Like Scenario #2, this scenario also would include a role for GNO, Inc. and the New Orleans Chamber to assist in financing matters.

ADDITIONAL CONSIDERATIONS

- **Operational Funding and Funds for Marketing.** Much of the recent dialogue about funding has focused on acquiring capital dollars for certain major facilities. In truth, every one of the scenarios for **Physical Development** also will require some new funding for operations, including staff. For example, GNOBEDD cannot become functional merely by appointment of a Board. It would need a new staff for undertaking development. Similarly, DDD or RPC would need some form of contractual arrangement and funding for undertaking development activities for the Medical District. In addition, the **Programs** entity or entities will need new funding for creating and implementing marketing/promotion activities. New funding also is needed for other aspects of the **Innovation Strategy** as well.
- **Funds for Land-banking.** One imperative that has not had sufficient attention in recent discussions is to begin to acquire properties that can be assembled and improved for private development and even for long-range institutional development projects. Funds for this should be pooled from sponsors and via special funding.
- **Master Plan Implementation and Controls.** The NY Associates planning effort is currently being led and sponsored by the RPC. At some point soon, there will be a land use plan, design and use guidelines, etc. for the Medical District. Whatever the ultimate solution about leadership and management, it is imperative that there be an immediate mechanism for implementing this new Master (Land Use) Plan, including controls on development uses.
- **Marketing—Promotion vs. Sales.** In the work paper on Market Strategy, we have defined two very different elements of marketing as **Promotion** and **Sales**. In the two-entity model suggested herein, we propose that:
 - The NOrcMC / NOBio revamped organization(s) (with GNO, Inc. and the Chamber) would be tasked with the broad-based **promotion** component—overall promotion of New Orleans Medical District as a destination for faculty, students, scientists, companies, etc.
 - The **Physical Development** entity (GNOBEDD or DDD or RPC) would be tasked with carrying out the more specific **sales** component—those efforts to specifically sell and lease real estate and manage/coordinate private developer activities.
- **A Regional Coalition.** The above two-entity model is intended to focus attention pragmatically on **programmatic** and **physical development** elements of the Medical District activities into two organizations composed of different skill sets, but working in close coordination. It would be possible, in addition, to borrow a note from St. Louis and convene a **New Orleans Regional**

Biosciences Coalition. This could be a membership group (not a corporation) that would have the broadest possible membership. It might convene quarterly, for example, to receive briefings from the two primary entities, review progress, and provide general input and ideas. Such a Coalition's membership would include:

- All the institutions in the Greater New Orleans region—higher education
- All the institutions in the Greater New Orleans region—clinical health care
- Broad business organization and community organization membership, including neighborhood and civic groups, venture capitalists, professional service providers
- All the bioscience companies in the Greater New Orleans region
- Government agencies

Such a coalition organization would provide a broad-based forum for discussion of vision and strategic issues. It also might be the organizational vehicle for establishing metrics of success by which to evaluate progress over time.

EXHIBITS

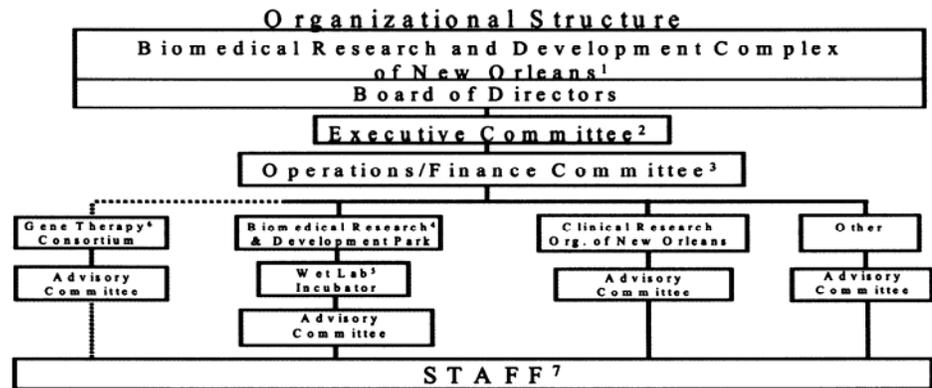
EXHIBIT 1—INFORMATION ON BOARD STRUCTURES—VARIOUS ENTITIES

HIGHER EDUCATION AUTHORITY OF LOUISIANA (HEAL)

• **Board of Trustees of Health Education Authority of Louisiana**

- A. There is hereby created in the office of management and finance of the Department of Health and Hospitals the Health Education Authority of Louisiana, which is hereby declared to be a body corporate and public, constituting an instrumentality of the state of Louisiana and exercising public and essential governmental functions. The domicile of the authority shall be in the city of New Orleans.
- B. The power to establish policy to carry out the intent of this Chapter shall be vested in a board of trustees which shall consist of the governor as ex-officio trustee and thirteen persons selected as follows:
- (1) Two members shall be appointed by the governor from a list of six names submitted by the Board of Supervisors of Louisiana State University and Agricultural and Mechanical College.
 - (2) Two members shall be appointed by the governor from a list of six names submitted by the Board of Administrators of the Tulane Educational Fund, Tulane University of Louisiana.
 - (3) Two members shall be appointed by the governor from a list of six names submitted by the Board of Administrators of Charity Hospital of Louisiana at New Orleans.
 - (4) Two members shall be appointed by the governor from a list of six names submitted by the Executive Board of the Louisiana State Medical Society.
 - (5) One member shall be appointed by the governor from a list of six names submitted by the statewide dental associations.
 - (6) One member shall be appointed by the mayor of the city of New Orleans with the advice and consent of the Commission Council from a list of five names, one each submitted by the Board of Administrators of the Tulane Educational Fund, Tulane University of Louisiana; the Board of Administrators of Charity Hospital of Louisiana at New Orleans; the Board of Supervisors of Louisiana State University and Agricultural and Mechanical College; local dental association memberships including Orleans Parish dentists; and the Orleans Parish Medical Society.
 - (7) Three members shall be appointed by the governor from the state at large.
- C. No person appointed directly by the governor or mayor or nominated by any of the nominating groups or individuals shall be associated in any staff or advisory capacity for which he receives payment for services from Louisiana State University and Agricultural and Mechanical College, Tulane University of Louisiana, or Charity Hospital of Louisiana at New Orleans, any statewide dental association, or the Louisiana State Medical Society.
- D. Each appointment by the governor shall be submitted to the Senate for confirmation.
- E. Members of the board who are appointed by the governor shall serve at the pleasure of the governor. The member appointed by the mayor of New Orleans shall serve a term of six years.
- F. A vacancy occurring on the board for any reason shall be filled in the same manner as the original appointment.
- G. The board shall employ a professionally qualified executive director to carry out the policies established by the board. The secretary of the Department of Health and Hospitals shall employ such staff as is necessary to carry out the policies and directives of the board and to operate and administer the functions of the authority. The compensation of the executive director shall be determined by the board and he shall be in the unclassified service of the state.

BIOMEDICAL RESEARCH AND DEVELOPMENT COMPLEX OF NEW ORLEANS



¹ Consolidate NORMC Board with Governing Body for the Biomedical Research & Development Park. (And perhaps others in the future, if appropriate)
² Executive Committee should be small - Chairman & Vice Chairman of the Board and three Board Members.
³ Operations / Finance Committee would be composed of designated Senior staff from the Participating / Member Institutions.
⁴ The Biomedical Research and Development Park establishes the identity of the geographic area and functions as land/building/economic development "branch" of NORMC.
⁵ The Wet Lab Incubator establishes the first physical entity (building) and is responsible for promoting and establishing new business opportunities in the Biomedical Research & Development Park.
⁶ The Gene Therapy Consortium has established a cooperative research relationship between the two Health Sciences Centers. It is shown here with a dotted line to recognize the Institutional relationships shared with NORMC and the potential for sharing of operational resources.
⁷ The Staffing box on the chart illustrates the opportunity to share administrative and operational expenses among the existing and future initiatives that share geography, missions, Institutional relationships and controlling/coordinating authorities.

Board of Directors of Biomedical Research and Development Complex of New Orleans

The Planned Board of Directors of the BRDCNO will consist of 15 members as follows:

- Chancellor of the LSU Health Sciences Center
- Senior Vice President for Health Sciences at Tulane University
- Chancellor of the University of New Orleans
- President of Delgado Community College
- President of Xavier University
- Chief Executive Officer of MCLNO
- Chief Executive Officer of Tulane University Hospital and Clinic
- Director of the Veterans Affairs Medical Center of New Orleans
- City of New Orleans Representative appointed by the Mayor
- Downtown Development District Representative appointed by DDD Board
- Louisiana Department of Economic Development Representative appointed by Secretary of DED
- A Member appointed by the State Representative of the Ninety-third Representative District
- A Member appointed by the State Senator from the Fifth Senatorial District
- A Member appointed by the Speaker of the House of Representatives
- A Member appointed by the President of the Senate

In each case, the specified Board member may designate an alternate representative, with voting authority, and Board members may be accompanied by appropriate institutional support as desired. Only specifically identified Board members or their designated alternate representative will be authorized to vote (15 votes maximum).

Source: New Orleans Biomedical Research and Development Park, Comprehensive Plan, March 2002, p. 21.

NEW ORLEANS REGIONAL MEDICAL COMPLEX, INC. (NORMC)

Voting Members, as listed in the NOrMC By-Laws (as amended through September 5, 1996), consist of persons who have a benevolent, educational, charitable or medical purpose or interest in creating a regional medical center complex in the Region, and are approved for membership by the Board of Directors. Voting members are required to pay dues in accordance with the By-Laws. They are divided into two categories: Charter Members and Associate Members.

Charter Members listed in the By-Laws are The Medical Center of Louisiana at New Orleans, the Downtown Development District, Louisiana State University Medical Center, Tulane University Medical Center, Veterans Affairs Medical Center, and such other persons as may be approved as Charter Members by the Board of Directors.

Each Associate Member shall be a person which has a substantial office or other substantial facility within the Region, has as part of its mission the provision of health care, health care related education or health care related research, and has been approved as an Associate Member by the Board of Directors.

Today, the Voting Members have been expanded greatly, as listed in Exhibit 3.

**GREATER NEW ORLEANS BIOSCIENCES ECONOMIC DEVELOPMENT DISTRICT
(GNOBEDD)**

GNOBEDD Board of Commissioners

A.(1) The district shall be governed by a board of commissioners referred to in this Chapter as the "board" consisting of thirteen members comprised of the following:

- (a) The president of the Louisiana State University System or his designee.
- (b) The president of the Tulane University Health Sciences Center or the president's designee.
- (c) The president of Xavier University or the president's designee.
- (d) The chancellor of Delgado Community College or the chancellor's designee.
- (e) The mayor of the city of New Orleans or the mayor's designee.
- (f) Three appointments by the mayor of the city of New Orleans from nominees submitted by Greater New Orleans, Inc., the New Orleans Chamber of Commerce, and the New Orleans Business Council.
- (g) Four appointed by the governor, at least two of which shall be residents of Orleans Parish.
- (h) The secretary of the Department of Economic Development or the secretary's designee.

(2) At least one member of the board appointed by the governor and at least one member of the board appointed by the mayor of the city of New Orleans shall be a minority.

Advisory Committee

J. There shall be an advisory committee of the district created by the board of commissioners of the district, which may include but not be limited to representatives of the Ochsner Foundation, the New Orleans Foundation, Children's Hospital, Department of Veteran's Affairs Medical Center, the University of New Orleans, the Greater New Orleans Foundation, Black Economic Development Council, the New Orleans Downtown Development District, Dillard University, and Southern University of New Orleans.

***Source: Chapter 27-C. Greater New Orleans Biosciences
Economic Development District Act***

§9039.56. Board of commissioners; members; officers; advisory committee

EXHIBIT 2—A COMPARISON OF ENTITIES

ADAMS AND REESE LLP



****Privileged and Confidential Attorney Work Product****

Memorandum

TO:	Byron Harrell, CEO Baptist Community Ministries
FROM:	E. Paige Sensenbrenner
DATE:	2/6/07
RE:	New Orleans Medical District Statutory Analysis

The purpose of this memorandum is to examine and analyze the legal authority governing the three entities responsible, to varying degrees, for development of the New Orleans medical district. This analysis focuses on to the purpose, powers, member institutions, board composition, geographic boundaries and creation date of the entities reviewed. The results, summarized below, reveal three separate entities of related purpose but with disparate powers and jurisdiction.

***Summary Comparison of the
Health Education Authority of Louisiana ("HEAL"),
New Orleans Medical Complex, Inc. ("NOrMC") and
the Greater New Orleans Biosciences Economic Development District ("District")***

Date of Creation:

- ***HEAL:*** HEAL was created by the Louisiana State Legislature on July 17, 1968.
- ***NOrMC:*** NOrMC was created in approximately 1988. Its Bylaws were formally adopted on September 9, 1992.
- ***District:*** District was created by the Louisiana State Legislature on July 12, 2005.

General Purpose:

- ***HEAL:*** HEAL's purpose is to, among other things, aid participating institutions in patient care, education and biomedical research.
- ***NOrMC:*** Refer to Bylaws and Articles of Incorporation for NOrMC's general purpose.
- ***District:*** District's purpose is to, among other things, facilitate creation of high-paying jobs by assisting in the development of biomedical facilities and programs.

Primary Institutions:

- **HEAL:** HEAL's primary institutions include Charity Hospital of New Orleans, LSU, and Tulane.
- **NOrMC:** NOrMC's primary institutions include Medical Center of Louisiana at New Orleans, Downtown Development District, LSU Medical Center, Tulane Medical Center, and the V.A. Medical Center.
- **District:** District's primary institutions include LSU, Tulane Health Sciences Center, Xavier, and Delgado Community College.

Composition of Board:

- **HEAL:** HEAL's board is comprised of thirteen members. Twelve of these members are appointed by the Governor from slates of nominees submitted by participating institutions. One member is appointed by the Mayor from a slate of nominees submitted by participating institutions and local associations.
- **NOrMC:** NOrMC's board is comprised of all Associate Members and two directors elected by each Charter Member.
- **District:** District's board is comprised of thirteen members. Four of these members are administrators of LSU, Tulane University Health Sciences Center, Delgado and Xavier (or their designees). Three are appointed by the Mayor from a slate of nominees submitted by local organizations. Four board members are appointed by the Governor. One member is the state Secretary of Economic Development (or his designee), and one member is the Mayor (or his designee).

Boundaries:

- **HEAL:** HEAL's boundaries includes the area within a ten-mile radius of Charity Hospital of Louisiana at New Orleans.
- **NOrMC:** NOrMC's boundaries includes the area of downtown New Orleans bounded by Loyola Ave., Iberville St., North Galvez St., South Galvez St. and the Ponchartrain Expressway.
- **District:** District's boundaries includes the territory located in the parish of Orleans bounded by Earhart Blvd., Carrollton Ave., Loyola Ave., and Iberville St.

Noteworthy Powers:

- **HEAL:** Among its powers, HEAL may issue bonds up to four-hundred-million dollars, expropriate real property², and formulate a general master plan of development in coordination with the master development plans of its primary institutions.
- **NOrMC:** Refer to Bylaws and Articles of Incorporation for NOrMC's powers.

² Subject to the constitutional limitations on expropriation discussed *infra*.

- **District:** District has the power to: issue general obligation bonds; levy impact fees for development of properties within its boundaries; plan, develop, operate and maintain activities used to, *inter alia*, foster new jobs, economic development, biomedical research and clinical trials; and, develop and implement a master plan.

Examination of Individual Entities

Health Education Authority of Louisiana (“HEAL”)

Date of creation:

- HEAL was created by Acts 1968, No. 112, § 1. The legislation became effective on July 17, 1968.

Purpose / Mission: (La. Rev. Stat. § 17:3051).

- HEAL’s purpose includes the operation of a cooperative and coordinated multi-institutional complex that will attract, encourage and assist public and private institutions and organizations that are dedicated to patient care, health science education and biomedical research. *Id.* at (1).
- HEAL also seeks to aid the development of health care and education programs by the primary and participating institutions and aid in the coordination of planning and attainment of the objectives of such institutions. *Id.* at (2).
- HEAL seeks to acquire, or assist in the acquisition of land and to develop facilities in the primary service area for use by the primary and participating institutions. HEAL also assists in the development, acquisition, construction, reconstruction, rehabilitation, improvement and operation of jointly useable facilities for such institutions. *Id.* at (3).
- Finally, HEAL’s mission includes providing, or assisting in the procurement of, financing for any of the above-listed missions. *Id.* at (4).

Member Institutions: (La. Rev. Stat. § 17:3052).

Primary Institutions include:

- Charity Hospital of Louisiana at New Orleans
- Louisiana State University and Agricultural and Mechanical College
- Tulane University of Louisiana.

Composition of Board / Method of Appointment:

The HEAL board of trustees consists of the Governor as ex-officio trustee and thirteen people selected as follows: (La. Rev. Stat. §17:3053).

- Two board members, appointed by the Governor, are selected from a list of six names submitted by the Board of Supervisors of Louisiana State University and Agricultural and Mechanical College. *Id.* at B(1).
- Two members, appointed by the Governor, are selected from a list of six names submitted by the Board of Administrators of the Tulane Educational Fund, Tulane University. *Id.* at B(2).

- Two members, appointed by the Governor, are selected from a list of six names submitted by the Board of Administrators of Charity Hospital of Louisiana at New Orleans. *Id.* at B(3).
- Two members, appointed by the Governor, are selected from a list of six names submitted by the Executive Board of the Louisiana State Medical Society. *Id.* at B(4).
- One member, appointed by the Governor, is selected from a list of six names submitted by the statewide dental association. *Id.* at B(5).
- One member, appointed by the Mayor of New Orleans, is selected from a list of five names submitted by the Board of Administrators of the Tulane Educational Fund, Tulane University, the Board of Administrators of Charity Hospital of Louisiana at New Orleans, the Board of Supervisors of Louisiana State University and Agricultural and Mechanical College, local dental association memberships including Orleans Parish dentists, and the Orleans Parish Medical Society. *Id.* at B(6).
- Three members, appointed by the Governor, are selected from the state at large. *Id.* at B(7).

Each appointment by the Governor must be confirmed by the Senate. *Id.* at D. Appointments of the Governor serve at the pleasure of the Governor, while the member appointed by the Mayor of New Orleans is limited to a six-year term. *Id.* at E.

Boundaries: (La. Rev. Stat. § 17:3052(8)).

- HEAL's boundaries includes the area within a ten-mile radius of Charity Hospital of Louisiana at New Orleans.

Powers:

HEAL's powers include:

- The power to issue bonds for an amount up to four-hundred-million dollars. La. Rev. Stat. § 17:3056.
- The power to incur debt and issue bonds for the Louisiana State University Health Science Center in Shreveport. *Id.* (by amendment in 2001)
- The power to expropriate real property in connection with the financing of projects of primary institutions, but not property belonging to public institutions or private educational, medical, or religious institutions without the consent of those institutions. La. Rev. Stat. § 17:3055(6).
- The power to formulate a general master plan of development in coordination with the master development plans of the primary institutions. *Id.* at (9).
- The power to make contracts of every nature and to execute all instruments necessary or convenient for the carrying out of its business. *Id.* at (4).
- The power to solicit, accept and collect funds, federal, state or local grants, donations and contributions in cash or in property and to take by will or bequest, donation, devise or other legal means, in trust or absolutely, real or personal property, whether tangible or intangible. *Id.* at (5).

- The power to acquire real and personal property. *Id.* at (6).
- The power to own, hold, sell, mortgage, convey, lease, rent, alienate and otherwise manage or dispose of, all or any part of its property, real or personal, or services. *Id.* at (7).
- The power to borrow money from any available source for any of the purposes of the authority. *Id.* at (8).

New Orleans Medical Complex (“NOrMC”)

Date of Creation:

- NOrMC was created in approximately 1998. The Bylaws of NOrMC were adopted on September 9, 1992. Unlike the other two entities addressed herein, NOrMC was not created by statute.

Purpose / Mission:

- Refer to Bylaws and Articles of Incorporation.

Member Institutions:

- Charter Members include: the Medical Center of Louisiana at New Orleans, the Downtown Development District, Louisiana State University Medical Center, Tulane University Medical Center, and the V. A. Medical Center.
- Associate Members are individuals who have a substantial office or other substantial facility within the region, have, as part of their work, health-care-related education or research, and have been approved as an Associate Member of the Board of Directors.

Composition of Board / Method of Appointment:

- The Board of Directors is comprised of every Associate Member and two directors elected by each Charter Member.

Boundaries:

- NOrMC’s boundaries includes the area of downtown New Orleans bounded by Loyola Ave., Iberville St., North Galvez St., South Galvez St. and the Ponchartrain Expressway.

Powers:

- No statutory authority supports the creation of NOrMC. Therefore, NOrMC is without governmental powers.

Greater New Orleans Biosciences Economic Development District Act (“District”)

Date of Creation:

- District was created by Acts 2005, No. 487, § 1, which became effective on July 12, 2005.

Purpose / Mission: (La. Rev. Stat. § 33:9039.63).

District’s purpose includes:

- Facilitating the creation of high-paying jobs by assisting the biomedical institutions and employees in the district with development of bioscience facilities and programs.
- Acquiring and developing real estate needed to grow the academic institutions within the district.
- Assisting with increasing research and training dollars for institutions within the district and receiving public and private funds for such purpose.
- Increasing basic and clinical research and the health and bioscience workforce.
- Working to bridge commercialization opportunities from research developed within the district.
- Enhancing interdisciplinary biosciences.
- Acting as a link to private sector life sciences companies in the state.

Primary Institutions:

No member or primary institutions are designated by the legislation, however area institutions are represented on the board of commissioners. In addition to the institutions with which the board members are affiliated, other entities identified in La. Rev. Stat. § 33:9039.66 may serve on an advisory committee. Those entities include:

- Ochsner Foundation
- The New Orleans Foundation
- Children's Hospital
- Department of Veteran's Affairs Medical Center
- The University of New Orleans
- The Greater New Orleans Foundation
- Black Economic Development Council
- The New Orleans Downtown Development District
- Dillard University
- Southern University of New Orleans

Composition of Board / Method of Appointment: (La. Rev. Stat. § 33.9039.66(A)).

District is governed by a board of commissioners consisting of thirteen members comprised of the following:

- The President of the Louisiana State University System or his designee.
- The President of the Tulane University Health Sciences Center or the president's designee.
- The President of Xavier University or the president's designee.
- The Chancellor of Delgado Community College or the chancellor's designee.
- The Mayor of the city of New Orleans or the mayor's designee.

- Three appointments of the Mayor of the city of New Orleans from nominees submitted by Greater New Orleans, Inc., the New Orleans Chamber of Commerce, and the New Orleans Business Council.
- Four appointments of the Governor, at least two of which shall be residents of Orleans Parish.
- The Secretary of the Department of Economic Development or the Secretary's designee.

At least one member of the board appointed by the Governor and at least one member of the board appointed by the Mayor of the city of New Orleans must be a minority.

Boundaries: (La. Rev. Stat. § 33:9039.62).

- District's boundaries includes all territory located in the parish of Orleans and bounded by Earhart Blvd., Carrollton Ave., Loyola Ave., and Iberville St. (referred to herein as "the district").

Powers: (La. Rev. Stat. § 33:9039.68).

District's powers include:

- The power to incur debt and issue general obligation bonds under the authority of and subject to the provisions of Article VI, Section 33 of the Constitution of Louisiana, and Subpart A of Part III of Chapter 4 of Subtitle II of Title 39 of the Louisiana Revised Statutes of 1950. *Id.*
- The power to plan, operate, and maintain activities and land uses to foster creation of new jobs, economic development, industry, biomedical research, clinical trials, commerce, manufacturing and other functions and activities to accomplish the other objects and purposes of District. *Id.* at (9).
- The power to develop and implement a master plan for the district related to biosciences. La. Rev. Stat. § 33:9039.69(7).
- The power to construct, acquire, lease, contract to manage or operate wet labs, research facilities, manufacturing facilities, clinics, laboratories or other facilities which may benefit the development of biosciences. *Id.* at (8).
- The power to receive funding from the City of New Orleans as part of the city's annual budget. La. Rev. Stat. § 33.9039.70.
- The power to levy impact fees for development of properties within the district, subject to the approval of the City Council of New Orleans. *Id.*
- The power to lease or sublease all or any portion of any property, by negotiation, for a term not exceeding ninety-nine years without advertisement for public bids. § 33.9039.68.
- The power to borrow money and pledge all or part of its revenues, leases, rents, and other income, fees, or resources of any nature as security for such loans or bonds. *Id.*

**Expropriation Powers of the State and its Political Subdivisions
in Light of Recent Constitutional Amendments.**

Recently amended, the Louisiana Constitution provides increased limitations on the “public purposes” for which land may be expropriated. These limitations, which primarily allow for expropriation of property for the construction of roads, ports, parks, waterways, and public utilities, also allow for expropriation for “[p]ublic buildings in which publicly funded services are administered, rendered, or provided.”³ La. Const. Art. I, § 4(B). The amended Constitution also provides that neither economic development, increased tax revenue, nor any incidental benefit to the public may be considered in determining whether expropriation of property serves a public purpose. *Id.*

Additionally, the amended Constitution requires the state and/or its political subdivisions to hold an expropriated property for thirty years prior to sale or lease *or* be forced to provide the right of first refusal to the original owner of the property or his heir (if no heir exists, the property must be offered to his successor in title at the time of the expropriation) at the current fair market value. La. Const. Art. I, § 4(H). If the original owner declines to purchase the property, the state must then sell the property through competitive bidding, open to the public. *Id.*

While the amendment restricts the scope and permissible purposes for expropriation by governmental entities, it does not abolish the power. An academic medical center or state teaching

³ La. Const. Art. I, § 4(B)(2) limits the term “public purpose” to the following:

- (a) A general public right to a definite use of the property.
- (b) Continuous public ownership of property dedicated to one or more of the following objectives and uses:
 - (i) Public buildings in which publicly funded services are administered, rendered, or provided.
 - (ii) Roads, bridges, waterways, access to public waters and lands, and other public transportation, access, and navigational systems available to the general public.
 - (iii) Drainage, flood control, levees, coastal and navigational protection and reclamation for the benefit of the public generally.
 - (iv) Parks, convention centers, museums, historical buildings and recreational facilities generally open to the public.
 - (v) Public utilities for the benefit of the public generally.
 - (vi) Public ports and public airports to facilitate the transport of goods or persons in domestic or international commerce.
- (c) The removal of a threat to public health or safety caused by the existing use or disuse of the property.

hospital may be deemed a “public building in which publicly funded services are administered, rendered or provided.” Such designation would permit expropriation.

Conclusion

While both HEAL and District were created by legislation, significant differences between the two exist. HEAL, the oldest of the three entities, has both a larger boundaries and a broader purpose than District. HEAL also has member institutions and the power to issue bonds for an amount up to four-hundred-million dollars. District, on the other hand, lacks member institutions *per se* but has broad and far-reaching power to act in furtherance of its purposes. Both entities have the power to develop a master plan, though District also has the power to implement that plan. The outlier of the group, NOrMC, lacks the statutorily-granted authority of the other two entities, but has, as its members, some of the same institutions relied upon by the other two. Nonetheless, in spite of their disparate powers and compositions, the three entities share related purposes.

EXHIBIT 3—COMPARISON OF CURRENT BOARD MEMBERSHIPS—NORMC AND NOBIO

*Analytical Comparison of Board Memberships of NORMC, NOBio, LGTRC, and LCRC as of January 2007
Organized by Type of Entity Represented and Showing Multiple Board Memberships of Individuals*

BOARD MEMBER	INSTITUTION / ORGANIZATION	NOBio	NORMC	LGTRC	LCRC
LSU Health Sciences Center in New Orleans/Shreveport		3	3	2	2
Ron Gardner <i>Vice Chancellor – Administrative, Community & Security Affairs</i>	<i>LSU Health Sciences Center in New Orleans</i>		X		
Larry H. Hollier, M.D. <i>Chancellor</i>	<i>LSU Health Sciences Center in New Orleans</i>		X		X
Sandra C. Roerig, Ph.D. <i>Dean for Graduate Studies, Associate Dean for Research</i>	<i>LSU Health Sciences Center in Shreveport</i>			X	
Joseph M. Moerschbaeche, Ph.D. <i>Vice Chancellor for Academic Affairs and Dean, School of Graduate Studies</i>	<i>LSU Health Sciences Center in New Orleans</i>	X		X	X
John Rock, M.D. <i>Chancellor Emeritus</i> (resigned Dec 2006)	<i>LSU Health Sciences Center in New Orleans</i>	X	X		
Bert Wallace <i>President Emeritus, LSUHSC Foundation</i> <i>Director, LSU Biomedical Research Fund</i>	<i>LSU Health Sciences Center in New Orleans</i>	X			
Tulane University Health Sciences Center		3	2	2	2
Alan Miller, M.D., Ph.D. <i>Associate Senior Vice President for Health Sciences</i>	<i>Tulane University Health Sciences Center</i>	X	X	X	X
Paul K. Whelton, M.D., M.Sc. <i>Senior Vice President for Health Sciences</i> (resigned Jan 2007)	<i>Tulane University Health Sciences Center</i>	X	X	X	X
Ed Michael Reggie <i>Managing Director</i>	<i>Future Factory</i> (represents Tulane University on NOBio Board)	X			
Clinical Health Care—Academic & Other			4	1	
Julie A. Catellier <i>Acting Director</i>	<i>SE Louisiana Veterans Health Care System (SELVHCS)</i>		X		
James Montgomery <i>President & CEO</i>	<i>Tulane University Hospital and Clinic</i>		X		
Harold M. Stokes, M.D. <i>Chief of Staff</i>	<i>East Jefferson General Hospital</i>			X	
Dwayne Thomas, M.D. <i>CEO</i>	<i>Medical Center of Louisiana New Orleans (formerly Charity Hospital)</i>		X		
Adler Voltaire <i>Chief Administrative Officer</i>	<i>Medical Center of Louisiana New Orleans</i>		X		

Analytical Comparison of Board Memberships of NORMC, NOBio, LGTRC, and LCRC as of January 2007
Organized by Type of Entity Represented and Showing Multiple Board Memberships of Individuals

BOARD MEMBER	INSTITUTION / ORGANIZATION	NOBio	NORMC	LGTRC	LCRC
Biosciences—Special & Collaborative Programs (Note: Board & Staff)		2	1	2	1
Aaron Miscenich <i>Executive Director</i> (not Board member)	<i>New Orleans BioInnovation Center</i>	X	X	X	
Steven E. Moye <i>President & CEO</i>	<i>Louisiana Gene Therapy Research Consortium and Louisiana Cancer Research Center (both)</i>	X		X	X
New Orleans Medical District-Other Higher Education Partners			3		2
Dr. Norman Francis <i>President</i>	<i>Xavier University of Louisiana</i>				X
Harold Gaspard, B.S. <i>College-Wide Dean, Allied Health Division</i>	<i>Delgado Community College</i>		X		
Norma Grace <i>Vice Chancellor</i>	<i>University of New Orleans</i>		X		
Wayne Harris, Ph.D., R.Ph. <i>Dean, College of Pharmacy</i>	<i>Xavier University of Louisiana</i>		X		
Donald Vandal <i>Deputy Commissioner of Administration</i>	<i>Louisiana Board of Regents</i>				X
State of Louisiana		2		2	1
Arthur R. Cooper <i>Executive Director</i>	<i>Louisiana Emerging Technology Center, Baton Rouge</i>	X			
Fran Gladden <i>Deputy Secretary</i>	<i>Department of Economic Development</i>			X	
Richard House <i>Executive Counsel</i>	<i>Department of Economic Development</i>	X			
Mr. Mike Olivier <i>Secretary</i>	<i>Department of Economic Development</i>				X
Jean Vandal <i>Deputy Commissioner</i>	<i>Division of Administration</i>			X	
Other Higher Education				2	
Dr. Clifton A. Baile <i>Professor</i>	<i>University of Georgia</i>			X	
Carl W. Bauer <i>Coordinator of Government Relations</i>	<i>University of Louisiana at Lafayette</i>			X	
New Orleans—Business and Community		2	4		2
Sandra M. Gunner <i>President & CEO</i>	<i>New Orleans Chamber of Commerce</i>		X		
Byron Harrell, Sc.D. <i>President</i>	<i>Baptist Community Ministries</i>		X		
William H. "Bill" Hines <i>Managing Partner</i>	<i>Jones Walker</i>		X		

*Analytical Comparison of Board Memberships of NORMC, NOBio, LGTRC, and LCRC as of January 2007
Organized by Type of Entity Represented and Showing Multiple Board Memberships of Individuals*

<i>BOARD MEMBER</i>	<i>INSTITUTION / ORGANIZATION</i>	<i>NOBio</i>	<i>NORMC</i>	<i>LGTRC</i>	<i>LCRC</i>
Don Hutchinson <i>President</i>	<i>DHutch Consulting</i>	X	X		
James P. "Jim" McNamara <i>Managing Principal</i>	<i>Exchange Equity, LLC</i>	X			
Ashton Ryan, Jr. <i>President & CEO</i>	<i>First NBC Bank</i>				X
Carroll Suggs	<i>Self-employed</i>				X

NUMERIC SUMMARY BY STAKEHOLDER CATEGORIES

<i>INSTITUTION / ORGANIZATION</i>	<i>NOBio</i>	<i>NORMC</i>	<i>LGTRC</i>	<i>LCRC</i>
LSU Health Sciences Center in New Orleans	3	3	2	2
Tulane University Health Sciences Center	3	2	2	2
Clinical Health Care—Academic & Other		4	1	
Biosciences—Special & Collaborative Programs	2	1	2	1
New Orleans Medical District—Other Higher Education Partners		3		2
State of Louisiana	2		2	1
Other Higher Education (not New Orleans region)			2	
New Orleans—Business and Community	2	4		2
Totals—Each of the Four Entities (including key staff attending meetings)	12	17	11	10

EXHIBIT 4—MATRIX OF FUNCTIONS FOR SELECTED PEER DISTRICTS

Functions and Roles Peer Examples	Land and Infrastructure— Acquisition and Development	Innovation Strategy— Programs and Services	Real Estate— Development, Marketing and Sales	Form of Organization
Memphis BioWorks Foundation, Memphis				
Was formed in 2001 to create a partnership of all medically-related entities in the area and to make Memphis region a “world class bio-science center” Memphis BioWorks Development Council Networking and development group of 80 bio-science entities.	Foundation is to acquire and develop land Specifically, on a 10-acre site donated to it by Baptist Hospital, wants to develop University of Tennessee-Baptist Research Park. Federally funded bio-containment lab coming as anchor.	The Foundation supports the planned multi-tenant building. Also created the Academy of Science and Engineering Charter School in Memphis. BioWorks Development Council markets the District/Region and supports intern programs. Provides assistance to existing and new bio-science companies needing space, financing, etc.	Memphis BioWorks is planning a 150,000 SF incubator and multi-tenant building in research park. Also, it aided in getting grants for District housing project rehab; and a federally funded bio-containment lab. Foundation is working with Development Council to generate more mixed-use development in the District.	Memphis BioWorks is a 501 (c)(3) foundation made up of major medical institutions, private technology businesses, and state and local political representatives. Bio-Works Development Council is a Chamber Committee set up to market the Memphis Medical District and to support economic development activities within the District. Has 80 members.
Illinois Medical District (IMD), Chicago				
560 acre area encompassing several major medical institutions and a developing tech park. Has six medical entities within District, including University of Illinois at Chicago Health Science Center & Cook County Hospital. 20,000 employees	Primary function is to acquire and hold land for medically related expansion. Currently acquiring more land. Has TIF and Enterprise Zone designations for tax incentives. IMD leases land.	\$220MM of research in District. District runs no programs. IMD oversees the Chicago Technology Park and its incubator. Tech Park is on District land. Park runs incubator program and Illinois Technology Enterprise Center, State-funded tech assistance center for entrepreneurs. IMD owns Tech Park incubators No seed capital.	Does not develop or build on its own, although it provides land for the Chicago Tech Park. All multi-tenant buildings in the tech park were constructed either with State grants or private developer financing. Has provided land for both commercial and residential development within the District as well. Acquires blighted areas and makes available to developers for mixed use as well. Tech Park markets itself. District markets itself on its website. IMD not necessarily satisfied with its marketing efforts.	State legislation created Authority in 1941. Funded by the State of Illinois. Has powers of eminent domain and can issue state bonds. Seven member board appointed by Governor, County Executive and Mayor of Chicago. No major medical representatives on board. Chicago Technology Park is a not for profit entity using Medical District land. Has board of seven, four of which are IMD appointees. All assets of Tech Park are owned by IMD.

<i>Functions and Roles</i> <i>Peer Examples</i>	<i>Land and Infrastructure— Acquisition and Development</i>	<i>Innovation Strategy— Programs and Services</i>	<i>Real Estate— Development, Marketing and Sales</i>	<i>Form of Organization</i>
University City Science Center, Philadelphia				
<p>Created in 1963 to redevelop deteriorated neighborhood along UPenn boundary.</p> <p>Currently, the largest and best-established urban research park in the US, with major (but not exclusive) focus on biosciences.</p>	<p>In the 1960s, the City used federal urban renewal funds to acquire old buildings on the Market Street corridor (northern boundary of UPenn campus) and tear them down—clearing the site to establish University City Science Center.</p> <p>UCSC acquires land through purchase. Has no ability to condemn property.</p>	<p>Now, after long-term real estate focus, UCSC is highly focused on creating and growing new companies.</p> <p>Provides technical assistance, investment capital and other services to technology-based companies through State-funded Ben Franklin Entrepreneurship program as well as its own for-profit affiliates.</p> <p>Has agreement with JETRO to house Japanese start-ups in bioscience incubator.</p> <p>Has done consulting and development off site in other locations.</p>	<p>Develops office and lab technology buildings either on its own or in partnerships with developers</p> <p>Controls about 800,000 SF of office/lab buildings, including multiple “incubators.”</p> <p>Has 1,500,000 SF of space in the project and proposes to double size in next 10 years. Just broke ground on 150,000 SF bldg with developer partner</p> <p>Has substantial amounts of space leased to UPenn Medical Center which uses it as “surge space” for shorter term grant periods and other soft money projects.</p>	<p>Non-profit, 501 (c)(3) established in 1963. Although non-profit, structured as shareholders. Owned by 30 universities, hospitals and medical centers. Four entities control 54% of shares.</p> <p>Board of directors (25) voted in or out by shareholders. Board has about 33% stakeholder representation. Others are business leaders or business professionals.</p> <p>Has a number of related for-profit and non-profit entities through which various functions are carried out.</p> <p>Manages its properties through a for-profit subsidiary.</p>

<i>Functions and Roles</i> <i>Peer Examples</i>	<i>Land and Infrastructure— Acquisition and Development</i>	<i>Innovation Strategy— Programs and Services</i>	<i>Real Estate— Development, Marketing and Sales</i>	<i>Form of Organization</i>
University Circle Campus, Cleveland				
<p>Began as a multiple university urban area. Now home to 40 + medical, educational and cultural institutions including Case Western Reserve University, its largest institution.</p> <p>UCI manages the area. Provides services to Members, develops housing and commercial facilities, provides community resources, advocates connections between Circle institutions and Cleveland school system.</p>	<p>Began as Foundation in 1957. Started by philanthropist who wanted to save neighborhoods and area.</p> <p>Land acquisition and management have been a major focus.</p>	<p>Many programs for residents, businesses. Supports festivals, funds own police department (25 officers) through voluntary contributions by Members.</p> <p>Has Advocacy Center to bring school children into connections with Circle institutions for enriching education. Also has marketing/public relations and fund raising staff.</p>	<p>Provides development expertise, manages own apartment buildings and acquires property and holds land for Campus expansion by its members.</p> <p>Has planning, development and property management expertise on staff.</p> <p>Has strong historical and environmental policies re development within the Campus</p> <p>Works to make University Circle a “place to be”. With \$2 Billion of new investment in last few years, and another \$1B being planned, is now focusing more on creating more residential space within the Circle.</p> <p>Is aggressive in economic development and has substantial budget to underwrite efforts.</p> <p>Good sized staff.</p>	<p>University Circle Inc is a 501(c)3 Community Development Corporation. It has a Board of Trustees of over 100—meets twice annually.</p> <p>Smaller Executive Committee of 30 make major decisions, meet six times a year. Officers meet monthly.</p> <p>Full Members total 40. They are located inside original geographic area of University Circle. Another 40 are Associate Members, usually smaller, lots of churches.</p> <p>Circle includes Cleveland Clinic, University Hospitals and Case Western Reserve Med School.</p>

<i>Functions and Roles</i>	<i>Peer Examples</i>	<i>Land and Infrastructure— Acquisition and Development</i>	<i>Innovation Strategy— Programs and Services</i>	<i>Real Estate— Development, Marketing and Sales</i>	<i>Form of Organization</i>
<i>CORTEX and Center for Emerging Technologies (CET), St. Louis</i>					
<p>There are two major focal points for Plant and Life Science strategy in St. Louis—one in Midtown/Central St. Louis and one at the edge of the City (near-suburban). An organization called Coalition for Plant and Life Sciences brings all the players together.</p>		<p>Organized in 1996, the Center of Emerging Technologies (CET), associated with the University of Missouri, St. Louis, operates two buildings in St. Louis. One is wet lab incubator, other is dry lab incubator. Land management is not a major focus of the organization.</p>	<p>CET is focused on developing bio-sciences companies. It provides small business services to its young companies, assists them in gaining seed and venture capital, and provides them with technical and scientific expertise as needed.</p>	<p>CET is working to get its third building financed so it can expand its wet lab space.</p>	<p>Both CORTEX and CET are 501(c)(3) organizations. They also have board members who sit on both boards so the collaboration of the two efforts can be facilitated.</p>
<p>Midtown is CORTEX—redevelopment initiative and Center for Emerging Technologies, both primarily focused on biomedical.</p>		<p>CET is located between Washington and St. Louis Universities. It leases its wet lab facility from St. Louis Development Corporation and operates the second facility for a private developer owner.</p>	<p>CET is almost always full. It has graduated several companies, one of which, Stererotaxis, has expanded rapidly and is now a CORTEX tenant.</p>	<p>CORTEX is primarily focused on inducing real estate development and hopes to redevelop the deteriorated area between the two health science/medical centers.</p>	<p>Both non-profits also have related entities, including for-profit, by which they conduct some of their functions. The affiliated development district, CORTEX West Redevelopment Corporation is a Missouri Chapter 353 Corporation which has the City's power of eminent domain and tax abatement.</p>
<p>Founding CORTEX members are Wash U, BJC HealthCare, St. Louis U, U of Missouri-St.L, Missouri Botanical Gardens</p>		<p>Center of Research, Technology, and Entrepreneurial Exchange (CORTEX) is a much larger urban redevelopment initiative, to cultivate the life science industry along with urban redevelopment.</p>	<p>CORTEX does not directly offer programs and services but it can access resources via its member institutions, as does CET.</p>	<p>The CORTEX group hopes to make a modest return on its investment in land acquisition and redevelopment, but its primary purpose is to create more land for bio-science and health science expansion and to attract development for that purpose.</p>	<p>CORTEX is funded by equity commitments of it founders in the amount of \$29 million. Funds are used primarily for land acquisition.</p>
<p>The other node is Danforth Plant Science Center and Nidus Center for Scientific Enterprise, primarily focused on plant science.</p>		<p>A major focus of CORTEX is its land acquisition program. The intent is to acquire sites and prepare them for private development (primarily).</p>	<p>CORTEX and CET are in the process of developing a more focused approach to collaborative Market Strategy for biosciences in central St. Louis.</p>	<p>CORTEX I (building) funding included EDA grant, New Markets Tax Credits and commercial bank financing.</p>	<p>CORTEX I (building) funding included EDA grant, New Markets Tax Credits and commercial bank financing.</p> <p>CET's first building was financed with EDA grant, City of St. Louis funding (via SLDC), and privately raised money.</p> <p>CET's second building was financed by a private developer, with Missouri historic tax credits.</p>

EXHIBIT 5—LEADERSHIP AND MANAGEMENT ORGANIZATION EXAMPLES

This is a compilation of information about leadership, management, and governing entities of a limited number of peer initiatives that are presented for background information to the discussion of how to organize, manage, and lead New Orleans Medical District.

SELECTION OF PEERS

It always is difficult to find peer situations that are actual counterparts to any region’s strategy. US peers of New Orleans Medical District include a very limited number of places actually styled as “medical districts” and several urban research parks that focus primarily on bioscience.

In this exercise, we selected peer projects because they have some mix of characteristics of potential relevance to New Orleans—summarized as follows:

Characteristic	St. Louis	Chicago	Memphis	Philadelphia	Cleveland
Complex Regional Strategy	X	X	X	X	X
Urban Site in a Major Urban Center	X	X	X	X	X
Multiple Universities and Health Care Institutions as Sponsors	X	X	X	X	X
Biosciences or Life Sciences is Entire (or Major) Focus	X	X	X	X	
Mature Strategy: (Bioscience Industry Cultivation)				X	
Mature Strategy: (Urban Redevelopment and Campus Improvements)		X		X	X

SOME OBSERVATIONS

- Chicago, Cleveland and Memphis are areas defined to include the actual institution campuses. In St. Louis and Philadelphia, the designated development areas are adjacent to university campuses. There are variations in means of defining “district,” including the range of “powers,” and services provided.
- Cleveland’s purpose was urban revitalization and campus preservation and expansion, not biosciences industry development. It therefore includes many cultural and community organizations and does not have a research park component (yet). But it is a wonderful, mature example of institutionally-driven collaboration and long-range strategy for urban redevelopment.
- Philadelphia, being a mature bioscience technology park, is the best example of long-range industry growth, as well as mature organization functions (for an effort that has been in place about 50 years).
- All show variations of highly complex governance structures and multiple organization alliances across academic, institutional, public, and private sectors. Cleveland is primarily institution-driven. Chicago is publicly-dominated. There is a mix of 501(c)(3) organizations, formally empowered

public or quasi-public authorities and “development districts,” and related operating corporations.

- In several cases that include a large, representative Board structure, there is another group or another mechanism for decision-making by a smaller body.
- In Chicago, institutions do not directly control land. In Philadelphia, the Board is not institution-dominated. Business representation on boards is important to those that are pursuing bio industry.
- Financing is highly varied—from institutional contributions to state appropriations and commercial real estate financing. In truth, most strategies obtain funding from multiple sources, for various uses.

ILLINOIS MEDICAL DISTRICT, CHICAGO, IL

Overview

The Illinois Medical District (IMD) covers some 560 acres just to the West of Downtown Chicago. It is a State of Illinois Authority and has power to issue bonds and take property by condemnation. It was formed by the State Legislature in 1941, to help organize and provide for the future expansion of a number of medically-related entities within the area. It has a staff of eight reporting to the Chief of Staff.

The District includes four major medical centers, six hospitals and federal, state, county and city health and human service agencies. The District was created to provide its member institutions with the land and proper environment for medical research. Member institutions have substantial investments in the District in terms of facilities, financial investment, and human resources.

The Medical District supports institutions with \$220 million in research dollars and that employ some 20,000 people.

Though formed initially to assist in the expansion of medically-related institutions, the Illinois Medical District also has provided land and development incentives for a commercial shopping center and new, for-sale housing developments. The District has a Tax Increment Financing (TIF) designation, a federal urban Enterprise Zone designation and a federal Empowerment Zone designation. These three designations provide developers with tax and other incentives.

Medical District Member Institutions

- City of Chicago
- Cook County
- John H. Stroger, Jr. Hospital of Cook County
- Rush University Medical Center
- State of Illinois
- University of Illinois Medical Center at Chicago
- Jesse Brown VA Medical Center
- Ruth M. Rothstein Cook County Bureau of Health Services
- Chicago Lighthouse for People Who are Blind or Visually Impaired.
- Hektoen Institute (Non profit research arm of Stroger Hospital)
- Illinois State Police Forensic Science Center at Chicago
- West Side Center for Disease Control – Chicago Department of Public Health

Illinois Medical District Commission

All developments within the District must be approved by the IMD Commission which seeks the counsel of all its members before making decisions. This assures that new developments are compatible with the purposes and needs of the stakeholders.

There are no representatives of any medical institutions on the IMD's seven-person Commission. These members are appointed by the Governor, the Cook County Executive, and the Mayor of Chicago. IMD management comments that having a board unrelated to the institutions within the District has allowed the IMD *"the*

autonomy to do many good things and to pursue a broader mandate than if it were dominated by potentially competing medical institutions within its borders.”

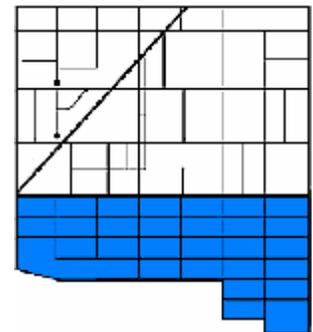
District Member Council

There is another, separate entity created within the IMD legislation called the District Member Council (DMC). It is comprised of the IMD and voting members of each of the institutions within the IMD that control more than 500,000 SF of building space.

This small, but powerful group of Members meets once a month to discuss/solve ***“problems and challenges,”*** especially those among Members. Most of the issues discussed are operational and the meetings are described as “cordial.” All land use issues are decided by the IMD Board at its quarterly Commission meetings, though Members can provide information and points of view during the District Member Council Meetings.

District Development Area (DDA)

On the right is a map of the Medical District, with the white portion on the north representing the existing/developed IMD land, and the dark blue to the south as the new land the District has been accumulating for additional stakeholder development. It also will be used to provide sites for companies expanding out of the Technology Park. The DDA is being marketed to a mix of private industry, technology companies, research facilities and general administrative office uses.



Chicago Technology Park (CTP)

Located on 56 acres within the Illinois Medical District (IMD), the Chicago Technology Park (CTP) provides both incubator and company expansion space, including companies involved in drug discovery and delivery, medical devices and testing, genomics, nanotechnology and others who collaborate with the medical facilities within the District.

The Chicago Technology Park is also home to the Chicago-Illinois Technology Enterprise Center offices, a state-funded program designed to nurture and support technology-oriented entrepreneurs, and BiTmaP, a bioinformatics training program sponsored by the US Department of Labor.

More than 300 people work for companies in the incubator and another 125 work for companies that have moved to other locations within the Park. The Park has successfully graduated over 25 firms into the local economy. The average growth rate of the companies has been 200% in the past four years and employment has increased from 80 to 400 in the past five years.



Enterprise Center



Enterprise Center II

The Tech Park was created by the State Legislature within the IMD boundaries. Though the Park is a separate corporation, all of its assets are wholly owned by the Medical District. The Park is staffed by IMD personnel. The Tech Park board has nine members: five are appointed by the IMD, the other four represent two of the major stakeholder institutions—The University of Illinois at Chicago and Rush University Hospital. Reportedly, some have suggested that the Tech Park be given more autonomy, but that would require a change in the board makeup and there are no current plans to do so.

Financing

The IMD's management operations are self-financing with revenues coming from land and building leases. It does not sell land. The Chicago Tech Park also is financed from IMD funds, though it has a small revenue stream from its incubators. When the IMD needs major funds for acquisition of land or buildings, it asks for a State appropriation.

Sources: Information from a telephone interview with Mich Hein, Chief of Staff, Illinois Medical District and the IMD website: www.imdc.org

MEMPHIS MEDICAL DISTRICT, MEMPHIS, TN

Overview

Memphis Medical District is a development sponsored by the State of Tennessee, University of Tennessee, City of Memphis, Memphis Regional Chamber of Commerce, the Baptist and Methodist Health Systems, large corporations and private bio-science companies. Included within its boundaries is the University of Tennessee-Baptist Research Park, planned for 10 acres of land formerly owned by Baptist Hospital.

Memphis BioWorks Foundation

The major source of leadership and management is the Memphis BioWorks Foundation, a 501 (c)(3) entity composed of the largest employers, medical institutions, technology companies and political representatives of the region. It was formed in 2001 by a local entrepreneur and philanthropist to spearhead the establishment of Memphis as an international Bioscience Center and to develop the Research Park.

The Foundation has four responsibilities:

- Provide Program leadership
 - Bioscience growth
 - Branding
 - Communications
 - Direction
- Build Infrastructure
 - Facilities
 - Environment
 - Resources for businesses and entrepreneurs
- Grow the Workforce
 - Education
 - Outreach
- Drive Entrepreneurship
 - Foster research
 - Incubate new companies
 - Form business partnerships
 - Access to capital



Baptist Memorial Hospital is a tertiary care teaching hospital affiliated with the University.



The formation of the Foundation was generated by one entrepreneurial business leader who convinced the university, medical, business and governmental communities that Memphis would never be a major regional health sciences center unless it coordinated its actions through a single organization. As a result, the two major medical institutions, the Baptist and Methodist Health Systems, joined together to gain a \$25 million NIH grant to develop a bio-containment lab as the anchor for the Park and the District as a whole.

Besides the NIH grant, the Foundation also supported creation of the Memphis Academy for Science and Engineering, a charter high school, to begin to build a better qualified workforce for the new economy.

The Foundation, and its sister corporation, the Memphis BioWorks Development Council, work jointly with local government on housing and redevelopment issues affecting the District. Most recently one of the stakeholders, St. Jude Children's Research Hospital, converted one of its antiquated buildings into a residential development for employee housing.

The Foundation's Board

The board of directors of the Memphis BioWorks Foundation includes almost all of Memphis business, medical and governmental leadership. Below is a list of board members by institutional title/representation:

- President & Executive Director of BioWorks Foundation. Former International Paper Executive
- Immediate Past Chair, Board of Directors of Baptist Memorial Health Care Foundation
- Tennessee Health Foundation, Blue Cross Blue Shield of Tennessee
- Specialist Head and Neck Surgery, Board of Shelby County Medical Society
- Chair, UT Department of Orthopaedic Surgery
- President, Southwest Tennessee Community College
- Chair, Buckman Laboratories
- Chair, GTx Inc., public bio-tech firm
- CEO, Smith & Nephew (Trauma, Reconstructive, and Clinical Therapies)
- President, Commercial Advisors, Chair of Memphis Tomorrow
- CEO, St. Jude Children's Research Hospital
- Chancellor, University of Tennessee Health Science Center
- Chair, Biometrics Therapeutics; former President, Smith & Nephew
- President, University of Tennessee
- CEO, Luminix Ventures
- President, University of Memphis
- President & CEO, Baptist Memorial Healthcare Corporation
- State Commissioner of Health
- President/CEO, Methodist Healthcare
- Memphis City Attorney
- Senior VP, Medtronics

Memphis BioWorks Development Council

In its efforts to revitalize and redevelop the Medical District, Memphis BioWorks created a new organization, the Memphis BioWorks Development Council, through a partnership with the Memphis Regional Chamber of Commerce. The Council’s responsibilities are:

- Produce a catalog of existing resources
- Build the Memphis Bio brand
- Facilitate lead development
- Raise visibility of Memphis bio-science resources

The Council is composed of health and medically-related professionals and institutions. It provides a network for some 80 bio-science members, including 12 hospitals, and works with bio-science companies seeking sites and space within the District. It also provides assistance to local bio-science businesses with problems of location, financing, etc. It is a “pay-to-play” organization, with yearly dues running from \$1,500 to \$7,500. Those funds are being used to develop a marketing program for the Medical District. The Council also has funded trade missions to other regions in the south, seeking to bring more

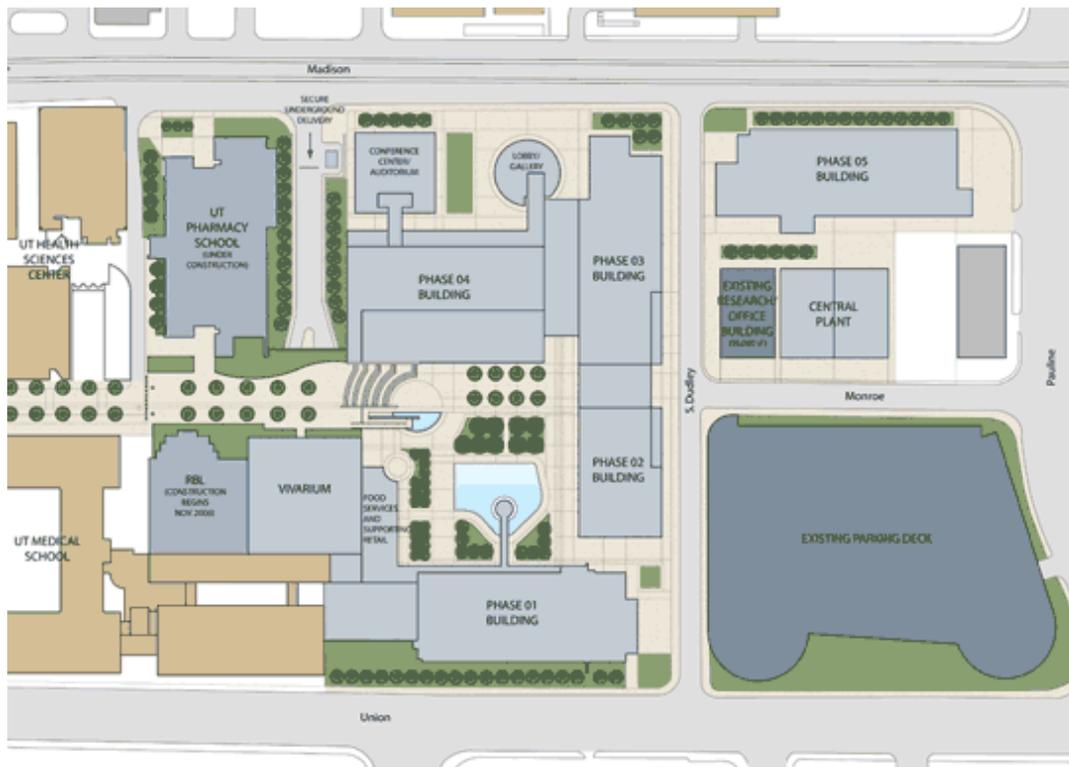
Rendering of the Future UT-Baptist Research Park



bio-science companies to Memphis.

There is yet a third group, composed of the medical institutions within the District, that works cooperatively on issues of vehicle access, parking, signage and other infrastructure issues.

Sources: Information from telephone interview with Mike Demster, Executive Director, Memphis BioWorks Development Council



Site Plan for University of Tennessee-Baptist Research Park

and the websites of the Memphis BioWorks Foundation and the Memphis BioWorks Development Council:

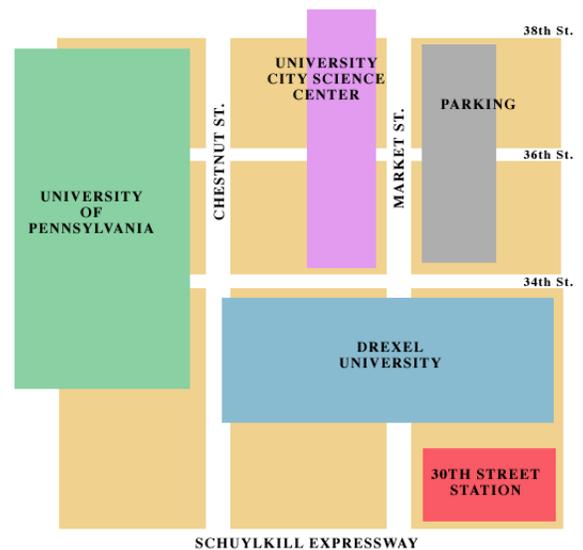
www.memphisbioworks.org

www.memphischamber.com

UNIVERSITY CITY SCIENCE CENTER, PHILADELPHIA, PA

Overview

The University City Science Center is one of the oldest research parks in the Nation and certainly the most successful urban research park in the US. Sited adjacent to the University of Pennsylvania campus, just west of downtown Philadelphia, the UCSC's growth has been tied almost directly to the growth of the University (UPenn). Though the UPenn main campus and



its Health Sciences Center are not formally within the UCSC site, nor part of something formally designated as a "medical district," UPenn's adjacency, its own expansion, the adjacent development of the UCSC amount to a "virtual medical district," with many of the same characteristics of its peer institutions in Chicago and Memphis. UPenn is the largest shareholder of UCSC stock and has four of its members on the board of directors, including the Executive VP of its Health System.

University City Science Center Corporation

The Science Center was formed in 1963 as a 501(c)(3) entity. Although it is a not-for-profit, under Pennsylvania statute, its members are called "shareholders." Its purpose was to redevelop a deteriorated district the City of Philadelphia had decided to clear for urban renewal purposes. This 17 acres of land along Market Street and on UPenn's border (and now the home of 150 companies) was to become the single most copied urban research park in America.



In order to give the entity some needed political weight, the original incorporators of the Center approached various educational and medical institutions throughout the City and region to become part of UCSC as owners and board members. Today, the Center has 30 Members, including a number of hospitals, all owning some portion of the entity. Its two largest shareholders were and continue to be UPenn and Drexel University, the two closest institutions to the UCSC urban campus.

The Science Center's primary purpose is to form, finance and grow bio-science and technology companies within the Philadelphia region. To do so, it began by developing real estate and then branched out into providing small business assistance, in part through the Ben Franklin Partnership, and seed capital funding.

Today, UCSC has helped to develop 1.7 million SF of real estate on Market Street; generated a \$10 million seed capital fund; and houses some 150 companies.

Over time, the Science Center began to set up various for-profit entities, as it became involved in the development of office and lab buildings in partnership with developers. As it added management of real estate over time, it also created a for-profit real estate management company, and further created other service and consulting companies that operate as for-profit entities.

Last fall, the Science Center broke ground for the first of five planned buildings that would double its office and lab space capacity to 3.5 million SF. Once again, UCSC is a limited partner in a for-profit development entity.

UCSC Board

Though UCSC at one time had a board comprised of representatives of all of its 30 Members plus business and political representatives, it was finally deemed too unwieldy. Today the board has 25 seats, with 19 filled, with eight of them representing Member owners. The rest of the board represents various private business persons and business service professionals whose skills and expertise are necessary for an organization of such size and complexity.

The board has one Annual Meeting a year, at which time new directors are brought on board. It has four committees which meet as needed to make major decisions. The board approves the annual budget, land acquisitions/dispositions and contracts. The board is self-perpetuating, electing new members to fill the seats of those rotating off.

The board members by title/affiliations are below:

- Ballard, Spahr, Andrews & Ingersoll, LLP
- President and CEO, Children's Hospital of Philadelphia
- President, New Jersey Technology Council
- President and CEO, The Science Center
- President and CEO, True Product ID, Inc.
- Executive Vice President, University of Pennsylvania
- Managing Partner, New Spring Ventures
- President of Commercial and Investment Banking, Commerce Bank
- Vice Dean, Research and Research Training, University of Pennsylvania
- President, University of the Sciences in Philadelphia
- Vice President, Corporate Development, Johnson & Johnson Development Corporation
- President and CEO, The Wistar Institute
- Senior Partner, Heidrick & Struggles
- Attorney at Law
- Managing Partner, Quaker BioVentures, Cira Centre
- Vice Provost for Research, Temple University
- School of Engineering and Applied Science Center University of Pennsylvania
- Provost and Senior Vice President, Drexel University, Office of the Provost

- Executive Vice President, University of Pennsylvania for the Health System, Dean, School of Medicine

UCSC Biotech Companies

As the US's *most mature urban research park*, which has long had a major focus on biotech, University City Science Center is home to many biotech companies.



Sources: Information from EKA files and from UCSC web site: www.sciencecenter.org

UNIVERSITY CIRCLE, CLEVELAND, OH

Overview

University Circle is a 550-acre, park-like concentration of nearly 50 cultural, medical, educational, religious, and social service institutions located at the eastern edge of Cleveland. The area takes its name from the trolley turn-around that in the late 18th century linked the campus with Cleveland's downtown.

In addition to the Case Western Reserve University, which is the largest institution in University Circle, the community includes Severance Hall, home of the world-famous Cleveland Orchestra; the Cleveland Museum of Art, housing one of the nation's finest collections; the Cleveland Institute of Music, the Cleveland Institute of Art; University Hospitals of Cleveland; the Western Reserve Historical Society; the Cleveland Botanical Garden; the Cleveland Museum of Natural History; the Cleveland Clinic, and many others.



The University Circle community, four miles east of downtown, went through a difficult period after WWII as the working class communities around it began to deteriorate. In 1957, the University Circle Development Foundation was founded by Mrs. William G. Mather. She also provided seed money to build a new Master Plan. One of the most important recommendations made in the 1957 Master Plan of University Circle was to ***"establish a central organization to administer the plan and give it some real authority."*** With that charge and full institutional support, the University Circle Development Foundation (UCDF) was formed as a ***"service organization to all institutions."*** Initial efforts focused on creating a ***land bank*** to purchase and hold available land needed by institutions for expansion. Soon, services that could be provided more efficiently if done collectively—parking, shuttle bus service, public safety, architectural review, and landscaping of common areas—were added.



Through the efforts of the Foundation, a slow improvement began as the new Master Plan was generally put into place. By 1994, there were 80 different member and associate member organizations in University Circle (or close by) that served the educational, medical, cultural and spiritual needs of Greater Cleveland.

Today, as a result of almost \$2 billion of infrastructure investment, with another billion dollars in the planning phase, places like Severance Hall, where the Cleveland Orchestra performs, already has been renovated as well as the Cleveland Botanical Garden, and a new housing district has been developed by Case Western Reserve University.

Other projects underway include a new heart center at the Cleveland Clinic; an expansion of the Cleveland Museum of Art by the architect Rafael Viñoly; a new wing at the Stokes Veteran’s Administration Medical Center; a new cancer center at University Hospitals Health System; and a newly integrated arts and sciences high school campus for the Cleveland Public Schools.

A research park called “the Quad” by Case Western Reserve University is in the planning phase, as well as a renovation of the Cleveland Museum of Natural History, and other facilities, all in anticipation of 10,000 new jobs over the next 10 years.

Some officials say all of this activity provides an opportunity to begin turning around a city that was identified by the Census Bureau this year as the poorest big city in America for the second time in the last three years.

University Circle, Inc.

In 1970, the University Circle Development Corporation was reorganized as University Circle Incorporated (UCI) with an added emphasis on strengthening the relationship between University Circle and its surrounding neighborhoods. In its outreach to the broader community, UCI began working closely with neighborhood organizations to build housing and to provide access to broader community



resources. It also began to champion new investments in the area and, with its 40 non-profit member institutions, it now acts as the development, service, and advocacy organization for the area.

Today, UCI provides its own police department, real estate management and financing operations, including owning and managing a number of rental properties throughout the area. The Circle Police Department is supported by voluntary donations from the UCI membership.

UCI also manages a number of other services, special neighborhood events and other activities in the Circle area and is supported by 80 sources of grants and donations that make up a major portion of its budget.

University Hospitals, along with its partners at Case Western Reserve University, comprise the largest concentration in bio-science in Ohio.

UCI Member Institutions

- Ambleside Towers
- American Cancer Society – Hope Lodge
- American Heart Association
- Case Western Reserve University
- Centers for Dialysis Care
- The Children’s Museum of Cleveland
- The Church of the Covenant
- Cleveland Botanical Garden
- Cleveland Friends Meeting
- Cleveland Hearing & Speech Center
- Cleveland Hillel Foundation, Inc.
- The Cleveland Institute of Art
- The Cleveland Institute of Music
- Cleveland International
- Piano Competition
- The Cleveland Museum of Art
- The Cleveland Museum of Natural History
- Cleveland Music School Settlement
- The Cleveland Public Library
- Cleveland Sight Center
- Cleveland Student Housing Association
- Cuyahoga County Coroner’s Office
- Epworth-Euclid
- United Methodist Church
- Fine Arts Garden Commission
- The Free Clinic of Greater Cleveland
- Gestalt Institute of Cleveland
- Hallinan Center

- Judson at University Circle
- The Junior League of Cleveland, Inc.
- Magnolia Clubhouse
- Maximum Independent Living
- The Mt. Sinai Health Care Foundation
- Mt. Zion Congregational Church
- Musical Arts Association
- Cleveland Orchestra
- Pentecostal Church of Christ
- Ronald McDonald House of Cleveland, Inc.
- The Sculpture Center
- The Temple-Tifereth Israel
- University Circle Housing, Inc.
- University Hospitals of Cleveland
- The Western Reserve Historical Society

The current board of trustees numbers over 100 and is unwieldy for effective management. Because this board only meets twice a year, the organization has created a 30-member Executive Committee that oversees the major business and policy issues facing the organization. It meets six times a year. For day to day matters, the five officers meet every month with staff to keep up with the many programs and functions of the organization and to deal with emergencies. This three tiered management system has evolved, over time, as a pragmatic response to the over-large board of trustees.

Financing

UCI's annual budget is \$8 million and it has an additional endowment of more than \$14 million. It does not have a legally-imposed geographical area, such as a Downtown Improvement District, which can impose a tax levy to fund its work. Most of UCI's funding is voluntary and comes from foundation grants, business donations and private contributions. The City of Cleveland provides some grant funds as well. UCI also receives income from its rental properties and vacant development sites it currently uses for paid parking lots. It has a fund-raising position on its staff whose job it is to generate grant requests to various entities, including foundations and government.

The University Circle Police Department and its 25 officers are separately funded by the 40 members within the original geographical boundaries of University Circle. Yearly contributions run from \$1 million for Case Western Reserve University to \$1,500 for a small, one office institution.

Sources: Information through telephone interview with Daniel Stahura, University Circle, Inc. and the University Circle, Inc. website; www.universitycircle.org

CORTEX AND CENTER FOR EMERGING TECHNOLOGIES, ST. LOUIS, MO

Overview

In St. Louis, several organizations are involved, in various ways, in elements of the region's Plant and Life Sciences strategy. A list is provided below.

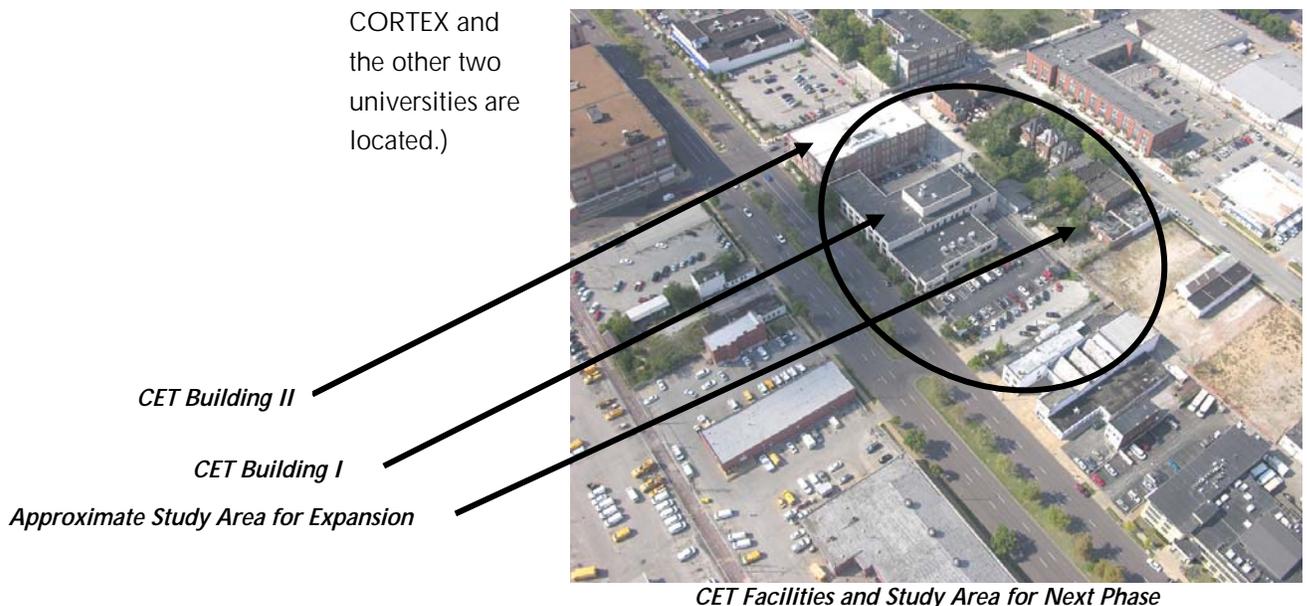
The biomedically-focused part of the regional strategy is centered primarily in the Midtown St. Louis area—an urban redevelopment area west of the Central Business District and adjacent to the primary health sciences assets of Washington University School of Medicine, BJC Health System, and Saint Louis University. (Map in the packet shows this physical location and physical relationships.)

Another major node of regional activity is the Donald Danforth Plant Science Center and the NIDUS Center for Scientific Enterprise—both more focused on the Plant Science element of the regional strategy and located in St. Louis, but closer to the county/suburbs than to central St. Louis.

As the dual Board list below illustrates, there are some key persons who serve on both the CORTEX and CET governing boards. As these initiatives are complementary elements of a single, unified biomedical science strategy for Midtown St. Louis, work is currently underway to clarify further a joint Market Strategy and to develop new elements of collaborative marketing activities.

Center for Emerging Technologies

Founded in its present form in 1996, this is a 501(c)(3) entity with a self-perpetuating Board that includes representatives of the major institutions, government, and the private sector. Although an independent not-for-profit corporation, the Center (or CET) is affiliated with the University of Missouri-St. Louis (UMSL) which provides management, accounting, and various other services. (UMSL's campus is not located within the Midtown area where the Center, CORTEX and the other two universities are located.)



The CET's mission is to provide commercialization and innovation and enterprise development support and facilities—primarily for companies in biomedical / biosciences disciplines. It operates two buildings, one with wet lab space and both with some shared facilities for conferences and training. These are on Forest Park Avenue, along one boundary edge of the CORTEX Redevelopment District, and between WUSM/BJC and Saint Louis University campuses. Planning is now underway for a third building, which also will be the first new building for the Center.

In addition to the main 501(c)(3) entity, the Center's governance structure includes two related for-profit entities through which the Center's functions in real estate management and equity participations are accomplished. The Center's Board or staff essentially controls these entities.

CORTEX

CORTEX was formed as an entity in 2002 to be the development sponsor of the CORTEX redevelopment initiative. CORTEX is the acronym for Center Of Research, Technology, and Entrepreneurial Exchange, which is a 501(c)(3) corporation, whose founding members are: Washington University, Saint Louis University, University of Missouri-St. Louis, BJC Health System, and Missouri Botanical Garden. There is an affiliated for-profit entity, St. Louis Land Company, LLC, through which land transactions are conducted.

There are two areas designated as CORTEX West (near WUSM and BJC) and CORTEX East (near Saint Louis University). A related corporation, CORTEX West Redevelopment Corporation, is a Chapter 353 redevelopment corporation to which the City has granted development rights and rights of eminent domain and tax abatement for CORTEX West—a 179-acre area.

The CORTEX governance structure also includes related corporate entities. For example, each building that CORTEX develops directly is and will be a single-asset LLC, such as CORTEX West Development I, LLC.

Financing

Center for Emerging Technologies

Basic operating funding for the Center's staff and programs is provided by annual grants from the State of Missouri; from UMSL; and to some extent from operating and grant revenues.

Building I was acquired and renovated for the Center's use by a combination of City funds (via St. Louis Development Corporation, as owner), US EDA, and private funds the Center raised. Building II was acquired and renovated via a partnership of the Center with a private developer / owner. Missouri tax credits were a significant element in that financing. The Center operates both facilities.

The Center is in early stages of planning to raise capital for its next building—currently assumed to be a mix of federal, state, and private sources.

CORTEX

Initial funding for CORTEX was in the form of equity commitments of the founding members in the amount of \$29 million. This funding is primarily for the critically important land acquisition program.

Financing of CORTEX I included a US EDA grant, New Markets Tax Credits loans, and commercial financing from Bank of America.

CORTEX, like CET, also pursues grant funding. One such grant is for intermodal transportation planning. CORTEX expects to generate modest returns on its real estate holdings and investments, in large part as a result of private development it will induce.

A possible source of forthcoming state money may be an allocation included in a state plan to sell a portion of its student loan portfolio (MOHELA). If this is approved, there is some funding intended for both CORTEX and CET included.

ORGANIZATIONS IN ST. LOUIS REGION ENGAGED IN THE PLANT AND LIFE SCIENCES STRATEGY

A number of organizations, directly or indirectly, play roles in the St. Louis region's Plant and Life Sciences strategy.

CORTEX (Center for Research, Technology and Entrepreneurial Exchange) www.cortexstl.com

Founded by Washington University, Saint Louis University, University of Missouri – St. Louis, BJC HealthCare and the Missouri Botanical Garden to create a thriving life sciences district in Midtown St. Louis.

Center for Emerging Technologies (CET) www.emergingtech.org

A not-for-profit entity organized in 1995 to develop specialized services and facilities that accelerate the growth of biomedical and other advanced technology companies and support the development of life sciences in the St. Louis region.

Nidus Center for Scientific Enterprise www.niduscenter.com

A life science incubator developed and funded by Monsanto, which specializes in plant science companies and provides services such as assistance with business planning, advisory boards, mentoring, negotiations, management building assistance, intellectual property protection and access to capital.

Washington University www.wustl.edu

Private university consistently ranked in the top10-20, with School of Medicine in the top five in rankings and NIH funding. One of three US lead centers in sequencing the human and now the cancer genome, comprehensive cancer center, particular strength in imaging, biomedical engineering and neuro science.

Saint Louis University www.slu.edu

Founded in 1818, it is the oldest university west of the Mississippi and the second oldest Jesuit university in the United States. The Medical Center at Saint Louis University the only school of public health in Missouri, major research in viral vaccines, and very soon, a state-of-the-art research building.

University of Missouri – St. Louis

www.umsl.edu

Public university which has educated the highest number of workers in the region. Special programs include the nationally recognized Center for International Business, Center for Tropical Ecology, joint Washington University-UMSL engineering program, newly named Center for Nanotechnology and School of Optometry. In addition to sponsorship of CET and CORTEX, has a research park which includes the headquarters for Express Scripts.

BJC HealthCare

www.bjc.org

One of the largest nonprofit health-care organizations in the United States, with net revenue of \$2.6 billion, BJC includes 13 hospitals and multiple community health locations. In St. Louis, Barnes-Jewish Hospital and St. Louis Children's Hospital are national models in patient advocacy, clinical quality and medical research.

Donald Danforth Plant Science Center

www.danforthcenter.org

Research to enhance the nutritional content of plants to improve human health, increase agricultural production to create a sustainable food supply, and provide the scientific ideas and technologies, in collaboration with researchers at the University of Illinois at Urbana-Champaign, the Missouri Botanical Garden, the University of Missouri-Columbia and St. Louis, Monsanto Company, Purdue University, and Washington University in St. Louis.

The Coalition for Plant and Life Sciences

Established to execute the recommendations of the Battelle report on creating a life science industry in St. Louis, this group has representatives from the region's academic institutions, business and civic leaders. Committees have focused on the creation of commercial R&D facilities, capital formation and creating a national agency for agriculture research.

Innovate St. Louis

Chartered by business, civic, university leaders, and the RCGA, Innovate St. Louis is designed to enhance the region's entrepreneurial environment and to catalyze the emergence of the St. Louis region as a global hub of innovation and entrepreneurship.

BioGenerator

www.biogenerator.org

Established to create biomedical companies from university and other technology, the Board includes tech transfer officers from Washington University and Saint Louis University, and the presidents of CET and the Nidus Center. Funding was provided primarily by the Danforth Foundation, McDonnell Family Trust and Monsanto.

St. Louis Arch Angels

www.stlouisarchangels.com

Provides opportunities for members to obtain outstanding financial returns by investing in early-stage companies with high growth potential in the St. Louis Region and accelerating them to market leadership by targeting an investment range that is generally underserved by institutional venture capital firms.

RiverVest Venture Partners

www.rivervest.com

RiverVest Venture Partners® is a venture capital firm investing nationwide in emerging medical device, biopharmaceutical and other healthcare opportunities. The RiverVest team applies strong operational experience and proven financial and technical expertise to collaborate with the entrepreneurs building tomorrow's leading life sciences companies.

Prolog Ventures

www.prologventures.com

Firm possesses technical understanding of scientific issues, entrepreneurial backgrounds in starting and growing successful companies, and in-depth knowledge of the region's resources to assist portfolio companies in refining strategy, sharpening execution, and building relationships.

Advantage Capital Partners

www.advantagecap.com

Provides capital and value added services to well-managed companies with superior growth potential located in geographic areas where little venture capital or venture capital infrastructure exists. The company also provides senior debt, mezzanine debt and equity capital to exceptional real estate development firms and real estate projects.

St. Louis Development Corp. (SLDC)

<http://stlouis.missouri.org>

An umbrella, not-for-profit corporation organized under Chapter 355 of the Missouri State Code with the mission of fostering economic development and growth in the City of St. Louis through increased job and business opportunities and expansion of the City's tax base. SLDC is directed by its own Board of Directors, and its employees serve as staff support for the City's seven economic development authorities.

RCGA (St. Louis Regional Chamber and Growth Association)

www.stlrcga.org

Connects business and civic communities in the 16-county, bi-state region, supporting public policy and infrastructure initiatives, attracting new jobs, capital and talent. Focus areas are economic development, including life science business development, entrepreneurial activities and capital formation; chamber activities; and regional public policy.

CWE (Central West End) Midtown Community Development Corp.

A taxing district that covers the Central West End and Midtown areas of St. Louis City and is focused on community improvement for the area. The academic institutions are contributors and are represented on the governing board.

In addition, the following organizations are participating in the New Orleans Medical District visit.

Stereotaxis

www.stereotaxis.com

Magnetic-guided system enabling physicians to safely and remotely perform computerized catheter-based cardiac and other interventional procedures. Physicians are able to conduct these procedures remotely from a control room adjacent to the patient lab, or cath lab, and outside the x-ray field that is used for all types of interventional procedures.

Kereos

www.kereos.com

Develops targeted therapeutics and molecular imaging agents designed to detect and treat cancer and cardiovascular disease earlier and more specifically than previously possible. Targeted therapeutics seek out definitive disease biomarkers and carry powerful payloads of proven chemotherapeutics with specificity and potency that make them potentially more effective and less toxic in treating disease.

Siteman Center of Cancer Nanotechnology Excellence

www.siteman.wustl.edu

At the forefront of advancing nanomedicine technology with the unique composition of their nanoparticle that allows them to attach not only homing molecules but also a large number of imaging molecules. The result is a signal that “lights up” the targeted cells. This strong illumination means the nanoparticle has great potential for spotting disease sites at an early stage, when treatment may be most effective, particularly cancer and heart disease.

Sources: Barbara Featherston, CORTEX; Marcia Mellitz, Center for Emerging Technologies; and Information in EKA files.

EXHIBIT 6—ACTION STRATEGIES FOR THE MEDICAL DISTRICT (DRAFT)

Note: All these are from earlier issue papers and still in draft form.

INNOVATION STRATEGY

Research Funding: Strategic Niches of Expertise

1. ***Niches of Opportunity for Scale Up.*** Including key faculty leadership in the deliberations, make prioritization decisions about which existing strengths should be subject to scale-up (or reorganization and scale-up) into a few more institutes or centers (like Cancer and Gene Therapy). Ideally, these would be selected in part for their potential applications in products, drugs, devices, or services.
2. ***Medical District Strategic Biosciences Program Plan.*** Develop these decisions into the Medical District's multi-institution ***Strategic Biosciences Program Plan***, including an overview of the targeted research programs and initial estimates of new resource requirements, including additional research faculty, technicians, research space, instrumentation, etc.
3. ***Major New Funding Initiatives.*** Use the ***Strategic Biosciences Program Plan*** for New Orleans Medical District as a point of departure for soliciting federal, state, and foundation funds for major research growth.
4. ***Individual Institution Program Development.*** In addition, of course, each institution will continue to manage its own internal strategic plan, which will include research growth targets other than those defined for the Medical District's ***Strategic Biosciences Program Plan*** (above).

Technology Development and Culture of Entrepreneurship

5. ***Emphasize Innovation—Not Commercialization.*** Help change the culture and attitudes of faculty toward participating in the Innovation System by avoiding the terms "commercialization" and "technology transfer." Instead, frame the conversation in terms of:
 - Translational research
 - Health care advances
 - Innovation
 - Entrepreneurship
 - Service to society.
6. ***Alignment of Message with Internal Reward Systems.*** Commit to sending clear and consistent top-down messages, via incentives, rewards, budgets, and other ways, that advancing innovation in bioscience applications IS directly relevant to the performance of institutions and their faculty. Be clear about this message in ways that count.
7. ***Policy, Process, Metrics of Success.*** Refine policies and success metrics to place priority on local/regional impact, not on maximized license revenues. Not all inventions are capable of becoming start-ups or having local impact. But, this focus might mean changing the process by which disclosures and potential innovations are evaluated and the decision process or options considered for IP disposition.

8. ***Innovation System and Technology Development Technical Capabilities.*** Enhancement of outcomes also will require more staff and expertise, which may offer an opportunity for the local institutions to share resources. Overall, greater levels of well-placed investments are required in the internal capabilities. LSU Health Sciences Center, in particular, should work to adopt and implement the Fishman report, as it pertains to LSU Health Sciences Center.

Business Incubation and Development

9. ***Facility.*** Proceed with design and development of a facility as soon as feasible
10. ***Network.*** Continue and expand efforts (already underway) in outreach to companies and entrepreneurs, in entrepreneurship training, and in overall cultivation of a sense of community and connections among bioscientists in the area.

Business Capital Formation

11. ***Seed Capital Fund.*** Propose to the State and private sources the creation of a seed capital fund in the range of \$10 million that would make biosciences (seed) investments in the range of six figures for proof-of-concept stage work, perhaps in two stages, and that would be dedicated to pre-company projects and companies associated with the New Orleans Medical District.
12. ***Aggressive Promotion to VC Community.*** Take actions to make national and global VC firms more aware of New Orleans.

Workforce Development

13. ***Workforce Information Monitoring.*** Establish the function of collecting and maintaining biosciences and health care workforce information (degree programs, degree production, employment levels, and company workforce needs).
14. ***Technician Program(s).*** Immediately initiate meetings with Delgado officials, including Dr. Kathleen Mix, to express detailed curriculum needs, assist in program design, establish funding needs, and offer support with other elements of the strategy for launching a two-year lab tech degree program. Via the BioInnovation Center, bio companies also should provide input on skills needs. NOOrMC should commit to support and assist Delgado in this endeavor as a shared agenda and collectively advocate for program funding.
15. ***Experiential Education.*** Engage institutions in creating a one-stop or centralized clearinghouse for all internship or co-op education opportunities relating to health care and biosciences in the region. While complicated, this would not be impossible. It might be “housed” administratively at the BioInnovation Center.
16. ***K-12 Science/Math Education.*** Investigate a few models for K-12 STEM programs, such as the five programs operating in Caddo Parish, that are supported, in part, by fundraising efforts of the Biomedical Research Foundation. Develop, acquire funding for, and implement such programs.

DEVELOPMENT STRATEGY

1. **Vision.** Reaffirm common commitment to a common vision for a large-scale, mixed-use urban redevelopment centered in health sciences, health care, and biosciences, with a core node around LSUHSC and Tulane, but extending to the boundaries as defined in the GNOBEDD legislation—to which all participants lend their efforts
2. **District Development.** Pending further discussions of organization and management, continue to consider how the GNOBEDD powers can be activated for District development (and how that relates to NORMC), as well as what role the DDD might play in certain of the projects
3. **Coordination with Canal Street and Iberville.** Clarify the actual mechanisms or structure to be applied for achievement of ongoing and effective and permanent coordination among the Medical District, Canal Street, and Iberville projects
4. **Design Guidelines.** Instruct the Master Plan team to consider the Canal Street design elements in development of design guidelines for the Medical District
5. **Use Guidelines.** Consider whether use guidelines or restrictive use covenants are needed for the Medical District and, if yes, develop them in the course of the Master Plan work
6. **Agreement on Priority Projects to Begin Now.** (will be listed).
7. **Planning of Priority Projects.** Consider in addition the following:
 - a. The exact priorities for initial street improvements
 - b. Identification of a specific initial building and the renovations to rapidly make it available for initial leasing and District uses
8. **Financing Plans for Priority Projects.** Develop specific financing plans and initiate requests—for all priority projects.

MARKET STRATEGY

1. **Market Strategy.** The stakeholders and others involved in marketing the Medical District must agree upon market strategy principles (see Market Strategy Work Paper).
2. **Roles.** Organize interim marketing and sales teams and assign general promotion to the PROGRAMS entity and real estate sales/leasing to the PHYSICAL DEVELOPMENT entity.
3. **Marketing Execution Plan.** The promotion and sales tactics defined in this Strategy provide an outline which needs to be developed into a detailed Marketing Plan
4. **Budget and Staff.** A two-year budget should be prepared for personnel and non-personnel costs and funded, for example, collectively by NORMC/NOBIO members.