MEMORANDUM

DATE: February 10, 2009

SUBJECT: The Leonardo

STAFF REPORT BY: Karen Halladay, Budget and Public Policy Analyst

AFFECTED COUNCIL DISTRICTS: All

Recommendation from Administration

On January 30, 2009 Mayor Becker recommended that the City Council approve both the issuance and sale of $10.2 million in general obligation bonds to pay for renovations to the Former City Library and to enter into a lease agreement with The Leonardo. This Administrative recommendation is the result of six months of internal and external review and analysis of the programming plans; building renovation needs; management and leadership - including Leonardo Board of Directors; capital and operating business plans; and fundraising plans.

Note: A Council Member expressed concern about the $10.0 million matching funds. The Leonardo has provided a revised schedule of matching funds. The revised schedule is attached to this memo.

"A New Way Forward"

In August of 2008, The Leonardo presented a new business and operating plan ("A New Way Forward") for the City Council's consideration. As a result of the Council's questions and the new plan, the Administration entered into a Memorandum of Understanding (MOU) with The Leonardo. A team consisting of members of the Administration, The Leonardo, and the City Council Staff were assigned to: 1) agree on The Leonardo's intended use assumptions, 2) develop and evaluate a building construction plan consistent with the use assumptions, 3) assure Silver LEED requirements, 4) confirm the bond match, 5) assess and evaluate the business plan and its viability, 6) develop project timelines, 7) develop lease terms, and 8) review means to reimburse The Leonardo for architectural fees already incurred for the project.

In addition to the City's study team, Raylene Decatur of Decatur and Company LLC was hired as an outside consultant to examine The Leonardo organization and its viability. Ms. Decatur has served as president of the Denver Museum of Nature & Science since 1995. Her experience includes positions of leadership and management at museums in Baltimore, Philadelphia, and Pennsauken, N.J. She reviewed documents associated with The Leonardo, including the business plan and conducted interviews with the Executive Director, Board Members, and others involved in the project.

The Leonardo project has changed in numerous ways due to the: 1) questions raised by Council Members and Administration, 2) MOU requirements, and 3) experience of hosting the *Body Worlds 3* exhibit and its 290,000 visitors during a four month period. Highlights of the changes are as follows:

- **Building Renovations** – The project scope and renovation cost, which was agreed to by City Engineering and Allen Roberts, Architect and Leonardo Board Member, is estimated to cost $12.5 million. This estimate includes the additional braced frame cost for the seismic upgrade and the auditorium renovation. Renovations to the Former City Library Building will meet current building code and allow the City facility to be operational. (Details of the project funding and building renovation scope were included in the Administration's transmittal dated January 29, 2009.) The February 2008 hybrid project scope for the building renovation was estimated to be approximately $19.1 million: the revised scope represents a savings of $6.6 million for building renovations. Several factors contributed to the projected savings, including the recent experience in hosting *Body Worlds 3*. Provided there are no unforeseen building conditions, the project timeline estimates a July 2010 opening.

- **Programming Changes** – Upon City Council approval of the bond issuance and release, The Leonardo will enter into a three year contract to lease more than forty proven exhibits from San Francisco's Exploratorium (ExNet), a leader in development of interactive science exhibits. The leasing of the exhibits is less expensive than developing exhibits in-house. In addition, the agreement provides technical support (30 days for a 3 year contract period) and a variety of educational services to The Leonardo organization. According to The Leonardo, these exhibits provide a solid experience for visitors and a solid foundation upon which staff can build future exhibits, while at the same time remaining cost effective.

  Additionally, rotating exhibits are planned for every other year. According to Ms. Decatur, there are many traveling exhibits, not on the same scale as The Leonardo experienced with Body Worlds, but exhibits that could serve other audiences in the community, build support for The Leonardo, and identify possible donors for the organization. Examples of temporary exhibits could include artifacts from The Forbidden City and The Dead Sea Scrolls.

- **Leadership - Organization Management and Board Governance** – Peter Giles has been the Executive Director of The Leonardo since summer of 2008. Mr. Giles has experience in establishing and managing Science and Technology Centers. Since arriving in Salt Lake City, he has overseen day-to-day business operations, public support, and fund development. In addition to Mr. Giles, there are five employees who handle financial, operational, and communication responsibilities for The Leonardo. One employee is Associate Director, Alexandra Hesse, who spearheaded and coordinated the recent *Body Worlds 3* exhibit.

  In addition, management and board members continue to develop their capacity to govern a growing organization, recruit board members, and participate in fund raising efforts. The Mayor's Chief of Staff is an ex-officio member of the board.

- **Relationship – The Leonardo and Salt Lake City Corporation** – The City will enter into a lease agreement with The Leonardo if the City Council approves the issuance and release of the voter-approved general obligation bonds. The negotiated lease agreement will identify responsibilities for both the City and The Leonardo. The Administration is in the process of preparing and negotiating the lease agreement. (**Note:** Lease agreement questions the Council may wish to consider are included below.)

Items the Council may wish to consider:

Lease Agreement

- Does the Council wish to review the lease agreement or a written agreement specifying terms and conditions prior to approving the issuance and release of the bonds? Lease agreement items the Council may wish to inquire about:
  a. Lease term – short term with extensions?
  b. On-going repair, maintenance, operating costs, and potential damage costs (i.e. water heater repair, air conditioning servicing, water leaks)
  c. Capital repairs and improvements (i.e. roof replacement, grounds, etc)
  d. Default – terms and conditions
  e. Notice of termination – time period defined
  f. Utility payments and late charges (boiler costs)
  g. Parking issues
  h. Hold the City harmless for Leonardo contracts (ExNet, rotating exhibits)
  i. Salt Lake City is not an agent or partner of The Leonardo
  j. Interruption of operations insurance
  k. Insurance coverage and amount defined – who is responsible for what insurance policies
  l. A statement about no additional financial support – other than the building
  m. Potential use of ESCO payments and reimbursements. (Note: ESCO is an energy service company that provides performs an in-depth analysis of the property, designs an energy efficient solution, installs the required elements, and maintains the system to ensure energy savings. Energy cost savings are often used to pay back the capital investment and financing costs of the project over a five- to twenty-year period.)
  n. Other conditions or parameters

- Does the Council wish to ask the Administration about its plans to use an ESCO for any portion of the Former Library Building renovation?

Personnel

- Does the Council wish to inquire about the possibility of key-personnel insurance?
- Does the Council wish to require a City Administrator to be an on-going ex-officio member of The Leonardo's Board?

Fund Development

- Does the Council wish to inquire about The Leonardo's fundraising efforts:
  - Ramp Up Needs - $5.0 million
  - On-going Public Support - $1.0 million/year
  - On-going Private Support - $0.5 million/year
- Does the Council wish to inquire about The Leonardo's progress with regard to possible partner organizations?

Funding Sources

- Current building renovation scope cost estimates, as agreed to by the City and The Leonardo, are $12,487,304. This estimated amount includes the additional cost for the braced frame of $594,519 and auditorium renovation of $646,178. The following table is a list of funding sources available for the building renovation:

Funding Source	Amount	Additional Information
2003 Voter Approved General Obligation Bond	$10,200,000	Bond issuance costs are estimated to be $200,000
FEMA Seismic Grant - This grant for the seismic upgrade requires a 25% Match, which is $341,776.	$1,025,328	Grant paperwork needs to be finalized. The City has been working closely with the State Agency that administers grant terms for FEMA. The reimbursement process, which will be through the State of Utah, and grant amounts have been confirmed. Addressing and agreeing on the best seismic upgrade method (cross-bracing) has taken time to resolve.
City Council General Fund Appropriation for Seismic and Asbestos Abatement – This appropriated amount includes the 25% required match of $341,776.	$1,493,396	
RDA Grant	$750,000	The RDA has specific conditions on their grant. One of the conditions is that the RDA money would be the last money spent on the project. Time extensions of the grant have been given several times. In August 2008, the RDA Board voted to approve the grant subject to approval of the City's funding for the project. Upon City Council approval for The Leonardo project, grant paperwork would be prepared and completed.
Rocky Mountain Blue Sky Grant	$125,000	
Total Building Renovation Budget	$13,593,724	
Estimated Building Renovation Cost	($12,487,304)	Building renovation costs are preliminary.
Estimated Potential Surplus	$1,106,420	Potential budget surplus is based on preliminary cost estimates.

- Additional Information on City Council Appropriation:
  - The Council appropriated $2,518,724 ($2.5M) in Budget Amendment #1 of Fiscal Year 2007-08. This was in anticipation of a FEMA grant for seismic upgrades. The City funds were to also cover asbestos abatement.

- Of the $2.5M appropriation $1,025,328 is anticipated in grant funds from FEMA. (The City was required to front the money and will be reimbursed by FEMA.) The FEMA grant required a 25% match of $341,776. The City match was included in the total $2.5M appropriation. The FEMA grant of $1,025,328 and the General Funds of $1,493,396 equal the $2.5M appropriation.
- The appropriating the $2.5M, the Council indicated its intent with regard to the $1,493,396 General Fund appropriation in the following City Council motion was made at the October 16th meeting:

  "Councilmember Jergensen moved and Councilmember Simonsen seconded to adopt Ordinance 46 of 2007 amending the fiscal year 2007-2008 budget as proposed by the Administration as noted on the attached summary sheet. By way of clarification, I also move that A-1, the seismic retrofit and asbestos mitigation expenditure of $2,518,724 for the Leonardo/Former Library Building be adopted, contingent upon receipt of the FEMA award agreement letter in the amount of $1,025,328, with the understanding that these FEMA funds will be reimbursed back to the City upon completion of this seismic retrofit and asbestos mitigation phase of the project and that the City seek every opportunity to reimburse the fund balance for the additional roughly $1.5 million in expenditures, which motion carried, all members present voted aye."

- Although estimating the costs for the building renovation project is in the preliminary stage, the Council may wish to consider the following scenario. Should the funding sources budget exceed the cost of renovating the Former Library Building, does the Council wish to consider the following options: (**Note:** These options may have specific issues or concerns that would need to be addressed before further action is taken. The scenario and options are presented for your consideration.)
  - After the FEMA 25% matching requirement has been met, reimburse the General Fund the remainder of any excess funds which had been allocated to The Leonardo project.
  - Allow any excess funds to be left in the CIP account for other identified upgrades to the Former Library Building.
  - The RDA grant letter mentions that RDA funds would be the last funds spent. Does the Council wish to continue with the approach of "Last in" for RDA funds given that the Council motion that "the City seek every opportunity to reimburse the fund balance…."?
  - Does the Council wish to split any excess funds with the RDA? The Leonardo? Both?

The Leonardo

Dear Cindy Gust-Jenson,

Following are additional funds raised by The Leonardo and not previously reported that could be used to offset the FEMA Grant funds of $1,026,328 for the match.

• State of Utah / Wired Contract granted 1/1/08:	$ 525,000
• Sponsorship revenues for The Leonardo's Body Worlds project:	$ 589,048
• Ticketing & other earned revenues for The Leonardo's Body Worlds project:	$1,692,715
	$2,806,763

Sincerely,

Peter Giles
Executive Director
The Leonardo
2/6/2009

MAIL: The Leonardo, c/o SLCPL
210 East 400 South, Suite 14
Salt Lake City, UT 84111
PHONE: 801.531.9800
FAX: 801.531.9801

RALPH BECKER
MAYOR

SALT LAKE CITY CORPORATION

OFFICE OF THE MAYOR

CITY COUNCIL TRANSMITTAL

David Everitt, Chief of Staff

Date Received: 1/29/2009
Date sent to Council: 1/30/2009

TO: Salt Lake City Council
Carlton Christensen, Chair

DATE: Jan. 29, 2009

FROM: Rick Graham, Public Services

SUBJECT: The Leonardo

STAFF CONTACT: Susi Kontgis
Sr. Policy Analyst
535-6414

DOCUMENT TYPE: Briefing

RECOMMENDATION: Approve the issuance and sale of general obligation bonds to pay for $10.2 million worth of renovations to the Old Main Library and authorize the Administration to enter into a lease agreement with The Leonardo.

BUDGET IMPACT: The Old Main Library currently needs approximately $12.5 million worth of renovations to meet current building codes and put the facility back into service. The funding sources are: bonds $10.2 million, FEMA seismic grant $1,025,328, City seismic allocation $1,493,396, RDA funding $750,000 and Rocky Mountain Blue Sky grant $125,000. The renovations to the Old Main Library are identified in appendix C of the attached paperwork.

If the City approves the issuance and sale of the general obligation bonds and enters into a lease agreement with The Leonardo, on-going maintenance costs must be addressed. The proposed construction scheduled anticipates project completion to be July 2010. Maintenance costs should be addressed in the lease agreement, and any City costs that may result would need to be included in the Public Service's FY 2010-2011 budget.

BACKGROUND/DISCUSSION: In November 1996, the engineering firm of Allen & Bailey performed a building feasibility analysis on the Old Main Library and indicated that the building did not comply with current seismic requirements. The Library

Feasibility Analysis further identified other potential building deficiencies associated with the HVAC, electrical and plumbing systems.

The decision was made to build a new Library and determine the future use for the Old Main Library building. As part of this process, in January, 2000, the Redevelopment Agency sent out 750 requests for Letters of Interest (RLIs) to non-profit agencies and cultural groups throughout the Salt Lake City area. Subsequently, the City chose the Library Square Foundation for Arts, Culture, and Science ("The Leonardo").

The Leonardo was established January 10, 2002. In August of 2003, City Administration and the City Council decided to advance the matter of issuing and selling general obligation bonds to finance the renovation, improvements and preservation of the Old Main Library building for the purpose of establishing a science, culture, and art education center (The Leonardo) to the qualified electors of the City. On November 4, 2003, the bond passed.

The City now needs to decide whether or not to issue and sell the bonds to finance the renovations needed in the Old Main Library and enter into a lease agreement with The Leonardo. The Administration recommends that the City issue and sell the bonds, and also enter into a lease agreement with The Leonardo.

If the City decides not to issue and sell the bonds, a determination will need to be made regarding funding for the $12.5 million worth of renovations needed to put the building back into service.

PUBLIC PROCESS: The City has engaged the public extensively in the development of The Leonardo concept and how to finance the necessary renovations to the Old Main Library.

In 2000, the RDA sent out 750 letters of Interest to non-profits and cultural groups. This process ended up with the selection to develop a science, art education and cultural center know as "The Leonardo", which was established in 2002. In 2003, the issue of financing the building renovations necessary to house The Leonardo was put to the vote of the people and it successfully passed on November 4, 2003.

Administrative Policy Analysis: The Leonardo

January 29, 2009

Policy Recommendation

The Administration recommends that Salt Lake City issue the bonds that Salt Lake City voters approved on November 4, 2003 as outlined in City Proposition number 2[1]. In addition, we recommend the City enter into a lease agreement with The Leonardo to provide the science, culture, and art education center as outlined in The Leonardo's plan *A New Way Forward - Dec. 5, 2008*, which was adopted and ratified by its board of directors on Dec. 22, 2008[2].

Background

Salt Lake City owns an architecturally unique building on Library Square in downtown Salt Lake City, across from the City and County building. The building was built in 1962 and was the home of the main Salt Lake City Library until the new Salt Lake City Library was ready for operation in early 2003.

In November 1996, the engineering firm of Allen & Bailey performed a building feasibility analysis and indicated that the building did not comply with current seismic requirements. The Main Library Feasibility Analysis further identified other potential building deficiencies associated with the HVAC, electrical and plumbing systems. To date none of these building deficiencies have been mitigated, and in fact additional building hazards have been identified, including the need for asbestos abatement.

In January, 2000, the Redevelopment Agency sent out 750 requests for Letters of Interest (RLIs) to non-profit agencies and cultural groups throughout the Salt Lake City area. The RLIs outlined the approved parameters for the re-use of the Old Library Building. Those approved parameters were:

- The re-use should provide for continued public use of the building.
- The City will lease the building to the re-use entities. A nominal rent will be charged to those entities which are non-profit and providing a public use of the building.
- The City will maintain the remainder of the public areas on the block.
- The re-use of the building does not include any rights to parking on the block or on the adjacent public streets, although the public visiting the Old Library Building can make use of the public parking to be provided on the block by the City.
- The City will retain use of those unfinished underground portions of the building that are not utilized by the selected re-use entities. Re-use entities shall identify which portions of the building will be needed for their operations and storage needs.
- Preference will be given to proposals involving multiple re-use entities.

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[1] The passage of proposition number 2 authorized Salt Lake City to issue and sell General Obligation Bonds of the City in an amount not to exceed $10.2 million and to be due and payable in not to exceed twenty years from the date of the bonds for the purpose of paying the costs of renovating, improving and preserving the old main library building and providing related facilities located at approximately 5th South Street and 2nd East Street to establish a science, culture and art education center currently known as The Leonardo at Library Square. *Cited directly from the Bond Ballot language.*

[2] A New Way Forward – Dec. 5, 2008 is attached in its entirety as Appendix A.

At the completion of the review and selection process the agency selected for the building re-use agreement with the City was The Library Square Foundation for Arts, Culture, and Science ("The Leonardo").

The Leonardo was established January 10, 2002. In August of 2003 City Administration and the City Council decided to advance the matter of issuing and selling general obligation bonds to finance the renovation, improvements and preservation of the Old Main Library building for the purpose of establishing a science, culture, and art education center (The Leonardo) to the qualified electors of the City with the following stipulation: "Private donations of $10 million in matching funds will be obtained by the prospective tenants before issuance of the City bonds. These funds may be comprised of Federal, State, and County funds, as well as private, corporate, and foundation contributions."

The *Special Bond Election * November 4, 2003* voter information guide provides the additional details regarding proposition #2:

PURPOSE:

- To renovate, improve, and preserve the old, city-owned Main Library building to house a science, culture, art, and education center, known as "The Leonardo at Library Square".
- To make way for Utah's first interactive science and technology center, arts education programming for youth, a documentary arts center that honors Utah's heritage and diverse cultures, a charter school, and dedicated space for the Center for Community and Culture.

DETAILS:

- Project is sponsored by The Leonardo Foundation, a non-profit, 501 (c) (3) partnership among The Center for Documentary Arts, Utah Science Center, and Salt Lake City's Global Artways program.
- The Leonardo Facility will consist of approximately 30,000 square feet of exhibit space, a gift shop, performance theaters, multimedia studios, science labs, a darkroom, a reception area, and conference rooms.
- The Leonardo is committed to raising matching funds of $10 million for the project.[3]

On November 4, 2003, City Proposition 2 passed. During the next five years the City and The Leonardo had a very difficult time agreeing on a building renovation scope, as well as a feasible and achievable programming scope and operating budget for The Leonardo. Those issues where further compounded by concerns that the City had mistakenly verified that the matching funds requirement had been satisfied, and that some of the money may have been double counted.

The resulting delay due to the disagreements between the City and The Leonardo led to inefficiency and waste of financial resources intended to support The Leonardo programs and operations, rather than addressing building design and programming scope. This delay also eroded donor confidence and undermined support and fundraising capacity from the financial donor base in and around the Salt Lake City area.

Finally, in August 2008, Salt Lake City Corporation and The Leonardo entered into Memorandum of Understanding (MOU) regarding The Old Main Library on Library Square in an attempt to rectify the issues and determine if the City should, indeed, issue and sell the General Obligation Bonds and allow The Leonardo to move forward.

[3] Quoting the Special Bond Election – November 4, 2003 voter information pamphlet.

The MOU is attached in its entirety as Appendix B to this document, but the primary tasks that were to be completed are as follows: The Leonardo and the City will cooperate to accomplish the following is a timely manner:

a. Agree on the assumptions associated with The Leonardo's intended use of the Old Main Library – in order to facilitate effective review of building design and construction;
b. Develop and evaluate a building construction plan consistent with the use assumptions (above): (agreed upon schedule – Appendix C);
c. Assure Silver LEED requirements are included in the project design (Appendix D);
d. Confirm The Leonardo's bond match (Appendix E);
e. Assess and evaluate The Leonardo's business plan and business viability (refer to Consultant – Raylene Decatur's interim report dated 1/26/09 Appendix F);
f. Develop project timelines and regular project reports; and
g. Develop lease terms for The Leonarado's use of the Old Main Library.
h. The City agrees to review means to reimburse The Leonardo for architectural fees paid to date by The Leonardo.

Alternatives/Analysis

- **Option #1) Do not move forward with the Leonardo and issue or sell the General Obligation Bonds or enter into a lease agreement with the Leonardo.**

If the City does not take action to move forward with issuing and selling the Bonds the Leonardo will most likely not be able to sustain its activities.

In addition, the City will still own the unique Old Library building which is in need of approximately $12.5 million worth of repairs in order to put the building back in service and the City will not be able to rely on the bond proceeds to cover $10.2 million worth of renovations unless a similar science, cultural and art education center can take its place.

- **Option #2): Issue and Sell the General Obligation Bonds and enter into a lease agreement with the Leonardo.**

The Leonardo just closed its Body Worlds 3: The Story of the Heart exhibit on Jan. 11, 2009. The exhibit opened at Library Square on Sept. 19th, 2008 and sold over 290,000 tickets during its 4 months of operation. When the exhibit opened attendance was approximately 2,300 per day and during the final days, attendance was sold out at 5,500 visitors per day. According to the Leonardo's data, over 26,000 students toured the Body World's exhibit, and many schools from outside the State of Utah, including California, Wyoming, Idaho and Colorado sent students and chaperones to Salt Lake City to see Body Worlds. We do not have quantifiable economic impact data regarding the exhibit yet; however, the boost to Salt Lake City's economic base and image was substantial[4].

It should also be noted that while the BODY WORLDS exhibit is not representative of the average Leonardo experience as proposed, The Leonardo's business plan does call for bringing in similar "Blockbuster" exhibits every other year. In addition, according to Raylene Decatur, the consultant hired by the City to evaluate the Leonardo's plan, the revenue assumptions and community impacts anticipated

[4] Refer to Appendix G: The Leonardo Hosts Body Worlds: Community Impacts

in the Leonardo's business plan and programming scope of work are reasonable, feasible and viable[5]. Please refer to Appendix F for an analysis of The Leonardo's business plan.

If the City does decide to issue the bonds and enter into the lease agreement with The Leonardo, then the items addressed in the MOU must be considered. The work to complete the MOU was extensive on the part of the City and The Leonardo. The final product resulted in a significantly more streamlined and cost effective program and design element scope for the building renovations. The City and The Leonardo were able to come to consensus on the funding priorities of the building design features and renovations as outlined in Appendix C. This ensures that the bond proceeds and the money appropriated by the City Council for the seismic retrofit and the asbestos abatement should be adequate to cover the cost of building renovations.

The Leonardo has completed an ambitious renovation schedule, Appendix H, which puts the opening of the Leonardo at July 2010. In order to meet this schedule, the Leonardo plans to raise an additional $5 million to "ramp up" and implement the initial programming elements and exhibition commitments necessary to open The Leonardo.

From The Leonardo's perspective, the construction schedule is critical because if it can not be met, The Leonardo may not have sufficient funds to continue its existence past the opening deadline of July 2010. Although the task is challenging, The Leonardo believes it is achievable, and the City's consultant has considered this in her assessment of the plan's viability and feasibility.

Finally, the last item in the MOU is the development of the lease agreement between the City and The Leonardo. This is in progress and should be an instrument to address any remaining concerns the City may have regarding The Leonardo's use of the Old Main Library.

For example, the lease agreement may address the City's ESCO process and how those energy saving improvements will be paid for in order to recover the cost of the relevant capital improvements. The lease agreement should also consider what constitutes a default on the part of The Leonardo, as well as the City's potential remedy should a default occur after The Leonardo opens. Additionally, the City and The Leonardo should reach an agreement on other uses of the facility by the City or for City-sanctioned activities (such as receptions, presentations, or meetings). Perhaps most importantly, the lease agreement should state clearly the City's position that no Salt Lake City General Fund money will be allocated for ongoing operating expenses associated with the Leonardo.

Recommendation

Salt Lake City should issue the bonds that Salt Lake City voters approved on November 4, 2003 as outlined in City Proposition number 2. In addition, the City should enter into a lease agreement with the Leonardo to provide the science, culture and art education center as outlined in the Leonardo's plan *A New Way Forward - Dec. 5, 2008*, and adopted and ratified by its board of directors on Dec. 22, 2008.

By issuing and selling the bonds that Salt Lake City voters approved on November 4, 2003, and entering into a lease agreement with the Leonardo, Salt Lake City will be providing a "world-class" educational and cultural community amenity to Salt Lake City. The bonds will help pay for the substantial

[5] Refer to Raylene Decatur's Interim Report to the City dated Jan. 26, 2009.

renovations the City needs to do in order to put its facility back in to service, and the programming offered by the Leonardo should significantly contribute to the energy and activity of Library Square. A successful Leonardo may enhance Salt Lake City's tax base and reinforce the City's image as a hub for innovative commerce and learning.

Appendix A:
Program and Business Plan Transmittal
Leonardo Final Report

PROGRAM AND BUSINESS PLAN TRANSMITTAL

Date: December 22, 2008

To: Salt Lake City Corporation
Attn: Mr. Rick Graham, Public Services Director
Ms Susi Kontgis, Old Main Library Team Leader

From: The Library Square Foundation for Art, Culture and Science ("The Leonardo")

RE: THE LEONARDO PROGRAM AND BUSINESS PLAN

In accord with the provisions of the *Memorandum of Understanding between Salt Lake Corporation and The Leonardo regarding The Old Main Library on Library Square,* dated August 29, 2008, specifically paragraph I., sub-paragraph e., The Leonardo is pleased to forward herewith its Program and Business Plan for City review.

The plan has been prepared by a wholly new management team whose experience with successful museum start-up and operations, as well as hands-on management of the *Body Worlds 3* exhibit are integral to its realization. Their roles constitute a stipulated prerequisite to the plan presented for City acceptance.

Responding in part to paragraph D of the *Memorandum*, concerning the leadership team, the plan presented herewith is solely a product of this new leadership team and represents only and exclusively The Library Square Foundation for Art, Culture, and Science ("The Leonardo") a 501(c)(3) Utah not for profit corporation as presently organized. The Founding organizations which convened to establish The Leonardo, namely the Center for Documentary Arts, Utah Science Center, and YouthCity Artways, have no other rights or responsibilities, implied or otherwise, in the implementation of this plan except as defined and duly authorized by The Leonardo Board of Directors as of this date or as such rights and responsibilities may be defined by the Board in the future. City acceptance of this premise is prerequisite to the success of this plan going forward.

Finally, the plan embodies a greatly reduced, less costly, and much more pragmatic project scope than heretofore presented. The building scope, ramp-up budget, operating budget, and development or public/private contribution requirements have all been scaled down to realistic and achievable levels. In our judgment this reduced project scope, as well as the governance and management changes noted above form the essence of and cannot be separated from the City Council's ratification of a decision to move forward on The Leonardo project.

Respectfully submitted by The Leonardo Board of Directors,

Mr. Marshall Wright, *Chairman*

Mr. Peter Giles, *Executive Director*

Dr. Suzanne Winter, *Secretary/Treasurer*

Dr. Ned Weinshenker

Ms. Jann Haworth

Mr. Will West

Ms. Beth Elder

Ms. Janet Wolf

Mr. Allen Roberts

Mr. Adam Price

Mr. Jeff Unruh

THE LEONARDO LEADERSHIP TEAM
TRANSMITTAL

Date: December 22, 2008

To: Salt Lake City Corporation
Attn: Mr. Rick Graham, Public Services Director
Ms Susi Kontgis, Old Main Library Team Leader

From: The Library Square Foundation for Art, Culture and Science ("The Leonardo")

RE: THE LEONARDO LEADERSHIP TEAM

Report to Salt Lake City Corporation on The Leonardo Leadership Team, December 22, 2008.

As required by our *Memorandum of Understanding* dated August 29, 2008, I am pleased to report on the Leonardo Leadership team, including management, Board development, and fund raising capacity.

1. **Management**: In July, 2008, The Leonardo board appointed Peter Giles as Executive Director, replacing Mary Tull, the previous Executive Director, who resigned her position. Mr. Giles has 22 years of experience in the founding, opening, and operating science, technology and culture centers California and Hawaii. In addition, Mr. Giles spent eight years as the founding CEO of the Silicon Valley Leadership Group and 6 years as a consultant for a major consulting firm. A summary of Mr. Giles bio is included in the board and staff bios attached to this report. Beginning in August, Mr. Giles spent approximately 2 weeks a month on site. As of November 1, 2008, Mr. Giles took up temporary full-time residency in Salt Lake City to direct the completion of all The Leonardo MOU deliverables.

   November 3, Mr. Giles, with board approval, eliminated three (3) staff positions and one contract employee at The Leonardo to align operating costs with funds on hand, forecasted revenues and work requirements of the MOU. Alexandra Hesse, who led the successful recruitment, opening, and operation of *Body Worlds 3* was appointed Associate Director. Dennis Evans, Finance, Building and Operations manager for *Body Worlds 3*, assumed additional duties, primarily the development of The Leonardo business plan, which was informed by *Body Worlds* operating experience and Mr. Evans' extensive business experience. Angela Dean, administrative assistant, expanded her role to serve as development assistant to increase The Leonardo's fund raising capacity. Mary Tull was brought in as part time fund raising consultant to develop, under Mr. Giles' direction, the fund raising plan accompanying the business plan. Operating expenses were further reduced by moving out of The Leonardo offices into the offices at the Old Main Library. Finally, monies were further saved by eliminating redundancies that were now possible because of the combining of office spaces.

   In summary, The Leonardo Board recognized the need to downsize and favor operating experience in museum and museum-like operations in staffing. As a result, there is now a

seasoned team in place with the kind of confidence and relevant track record that only comes through successfully conceptualizing, opening and operating a major educational attraction.

2. **Board Development** The Leonardo (The Library Square Foundation for Art, Culture, and Science), currently has a governing board of 12 members, plus two ex officio board members, and a *Renaissance* Advisory Board consisting of 19 community and business leaders. The governing board is comprised of civic minded, seasoned leaders in the areas of the law, architecture, government, business, and education. (Note: See attached bios for background on currently serving governing and *Renaissance* board members.) The Board has acted to develop its capacity to govern a growing organization, broaden the cross section of the community represented on the board, and support more significant participation by the board in direct giving and soliciting support. Below are summarized steps taken during the course of the MOU period and priority steps on the board's agenda once the decision is made by the City to move forward with the building project:

   a. Established board executive committee, consisting of board chair, executive director, board member at large, and treasurer.

   b. Established Board Facilities Committee and its chairman; other members to be named.

   c. Formalized changes to bylaws to increase the allowable number of Board members from 15 (fifteen) up to as many as 30 (thirty).

   d. Extended terms of all currently serving board members to June 30, 2009 to ensure continuity of board participation as project moves into next implementation phase.

   e. Elected David Everitt, Chief of Staff to Mayor Ralph Becker as an *ex officio* member of the board.

   f. Held a retreat during the MOU period (August 30, 2008) to develop categories of board members needed to augment current capabilities of the board, and a list of candidates who 1) fit those categories, and 2) have some connection to The Leonardo already, or, who are approachable by current board members. Categories needing better representation on the board:

   - Senior SLC business leader
   - Technology business leaders, including some with Park City presence and California-Utah connections.
   - Salt Lake City Council
   - Salt Lake City west side
   - Major local foundation, principal, spouse, or next generation
   - At least one high net worth, philanthropically disposed individual, committed to future of Salt Lake City and Utah.
   - University of Utah
   - K-12 educator

   g. Will develop for adoption a charter for the Renaissance Advisory Board members that will emphasize networking (friend raising) in support of fund raising goals.

   h. During the MOU period, The Leonardo governing board launched a first-time ever campaign among the governing board, Renaissance board, and staff to raise funds by yearend. The goal, since this was a first time campaign, was to secure 100% participation. With two weeks remaining, 80% have contributed for a total raised of $42,000 with 8 yet to be heard from. In addition, $81,000 value in kind has been contributed to The Leonardo by board members in legal, architectural and sound technology services. These

results speak well for both the direction and potential for board development, and fund raising capacity.

3. **Fund Raising Capacity** The Leonardo team is headed by Peter Giles, who has 20 years experience in significant, institution building fund development, raising over $60M ($30M cash, $30M value in kind) for The Tech Museum for the capital campaign, and $12M for an endowment*. To fund annual operating budgets, Mr. Giles led a team that raised seven-figure amounts annually for operations from 1990 through 2005. In Hawaii, Mr. Giles was instrumental in securing a $500,000 lead gift for 'Imiloa Astronomy Center of Hawaii prior to the early 2006 opening, overseeing an gala opening fundraiser that garnered over $250,000 in Hilo, Hawaii, and secured six figure operating funding in 2006-2008 to augment public funding. In San Jose, Mr. Giles played a strategic and active role in recruiting board members, and developing board leadership and fund raising skills, leading to increased board annual giving from $50-$100k a year in early 1990's to about $700,000 in 2005.

   Prerequisite to building the fund raising capacity of The Leonardo Board will be the development of a Leonardo Campaign Cabinet consisting of a dozen or more prominent individuals who themselves or their respective businesses or foundations are willing to make a major gift, assist in the nomination and recruitment of governing and Renaissance Board members who will participate in their own 6 (six) or 5 (5) figure gifts capital campaign gifts, and are fully capable of contributing 5 (five) figure or 4 (four) figure annual gifts. Since diversity and University and public educators are areas of interest for future board development, there will be board members of whom gifts at these levels will not be expected. Nonetheless, a standard of 100% capital participation and 100% annual fund participation will unite board members and enable them to confidently communicate The Leonardo mission and their personal commitment to others able to provide support.

   Details relating to The Leonardo's fund raising capacity are found in the Leonardo plan, *A New Way Forward.*

   In summary, The Leonardo has demonstrated the commitment to make the changes necessary to succeed. The seasoned management team is prepared to move forward with the Body Worlds success on its resume. The board has committed itself through its actions and plans to develop its governance, diversity, and fundraising capacity.

*As a qualifier, the period during which this money was raised was during an economic boom. Current economic conditions, 2008-2009, will significantly increase the risks of achieving the fund raising goals and timetable that The Leonardo team would be capable of during better times. Further, these monies were raised in a different area and while experience in fundraising in other states is relevant, there is a relationship and learning curve which must be considered.

Respectfully submitted to Salt Lake City Corporation,

Mr. Peter Giles
Executive Director

Ms. Alexandra Hesse
Associate Executive Director

The Leonardo Board of Directors

Marshall Wright
Director, Business Development
State of Utah, Governor's Office of Economic Development

Tamara Goetz
Utah State Science Advisor
State of Utah, Governor's Office of Economic Development

Jann Haworth
Artist and Co-Founder of Sundance Mountain Charter School
Sundance Institute

Dr. Ned Weinshenker
Vice President of Strategic Ventures and Economic Development
Utah State University

Janet Wolf
Director of Arts Education Initiatives

Peter Giles
Executive Director
The Leonardo

Will West
Founder
Control4

Allen Roberts
Partner
Cooper, Roberts & Simonsen

Adam Price
Attorney & Arts Advocate
Jones, Waldo, Holbrook & McDonough

Suzanne Winters
Tech Outreach Coordinator
USTAR

Jeffrey Unruh
Founding Principle
Alerion Capital Group
James A. Unruh Family Foundation

The Leonardo Board of Directors

Marshall Wright, Chair, Executive Committee
Wright brings over 40 years of experience in engineering, marketing and management in the technology sector to The Leonardo Board. He has worked for Sperry Corporation and Unisys, and recently retired as director of strategic planning and business development for homeland security programs at the Utah division of L-3 Communications. Currently, Wright serves as director of business development for the State of Utah's Governor's Office of Economic Development, and is also a member of several local business organizations that promote economic growth in Utah. Wright is an advisor to the State of Utah's Center for Excellence Program, which funds emerging technologies and fosters business development partnerships between academia and the local Utah business community.

Janet Wolf, Board Member
Janet Wolf directs the Beverley Taylor Sorenson arts learning program for Utah Arts Council. Funded by the Utah State legislature, the initiative partners with the Utah State Office of Education, Utah PTA, art works for kids, and the Utah Arts Council to bring arts education to elementary schools around the state of Utah. Previously, Ms. Wolf directed SLC's Youth and Family Programs division (YouthCity), which includes Leonardo partner Global Artways. Wolf has helped grow the program from a few activities managed out of the Mayor's office, into a permanent part of Salt Lake City's Department of Public Services. Prior to YouthCity, Wolf worked in a variety of community services positions, including associate executive director for Travelers Aid Society (The Road Home) and director of community services for Planned Parenthood Assoc. of Utah. Since 1988, Wolf has also worked as a psychotherapist in private practice.

Allen Roberts, Board Member,
Allen D. Roberts, AIA is president of Copper Roberts Simonson Associates, a 70-member architectural firm headquartered in Salt Lake City. He specializes in designing historic building restorations and renovations, designing green/sustainable projects and designing of a variety of new building types. His projects have received more than 50 awards for design excellence. He is an award-winning author of numerous books and articles including the best-seller and Pulitzer Prize nominee, "Salamander." He lectures and teaches architecture and architectural history for Snow College and the University of Utah. Allen is also an artist and last year had published a book of his drawings and paintings. He has served on more than 25 boards of non-profit foundations and organizations including the board of directors of the Center for Documentary Arts. Born and raised in the Milwaukee and San Francisco areas, Allen has five grown children and lives in Salt Lake City.

Dr. Ned Weinshenker, Board Member
Dr. Ned Weinshenker currently serves as vice president of strategic ventures and economic development at Utah State University. Prior to accepting this position, he served as director, Life Science Cluster, for the Utah State Governor's Office of Economic Development where he was responsible for coordinating statewide resources in the life sciences for business development in biotech, medical devices and pharmaceuticals. He also worked in upper management positions at several Silicon Valley biotechnology and venture capital firms, and was president, chief executive officer and director for Salt Lake City-based IOMED, where oversaw a successful IPO. Weinshenker has a doctorate in organic chemistry and has worked as a professor at the University of Maryland. He also served as an invited lecturer and visiting scholar at Stanford University.

Will West, Board Member

Will is the CEO and co-founder of Control4, the leader in home automation software and hardware for the broad market. Prior to Control4, he co-founded STSN (now iBAHN), the worldwide leader in broadband services for business travelers serving millions of customer in thousands of hotels. Prior to founding STSN, Will was CEO, and co-founder of PHAST Corporation. Under his leadership, PHAST became the leading manufacturer of high-end home automation equipment. Will's other professional experience includes Proctor & Gamble, the FSLIC, and Wasatch Advisors. He holds a degree in Finance from the

University of Utah, and an MBA from the Wharton School at the University of Pennsylvania. He also holds the CFA designation. Will serves as chairman of the board of the Utah Capital Investment Corporation (the State of Utah's "Fund of Funds"). He is also the past chairman of the board for Utah Technology Council (UTC). Will is currently on Utah Business Magazine's list of the 100 Most Influential People in the state, and on Connect Magazine's Top 25. He was named Utah Valley Entrepreneur of the year in 2004 and in 2006 he was named the Ernst & Young Master Entrepreneur Of The Year®. He holds a Bachelor's degree in Finance from the University of Utah and a Master's in Business Administration from the Wharton School of Business.

Jann Haworth, Board Member

Jann Haworth is a painter and sculptor perhaps best known for her contributions to the Pop Art Movement in the United Kingdom. This work culminated in her efforts as co-designer of The Beatles Sgt. Pepper album cover for which she received a Grammy. Haworth is the founder of the Art Shack and the Recycle Hot Glass Studios in Sundance. Haworth co-founded the Sundance Mountain Charter School [now known as the Soldier Hollow Charter School]. She directed and contributed to the mural project 'SLC Pepper' as well as contributed to the 337 Project; both located in Salt Lake City. She has had eleven solo shows and is represented in numerous museums, publications on Pop Art and private collections internationally. Haworth currently lives and works in Sundance, Utah.

Adam Price, Board Member, Executive Committee

Adam Price is a commercial litigator and shareholder at Jones Waldo Holbrook & McDonough, one of Salt Lake City's oldest and largest law firms. Price's skills in the courtroom have been recognized by his peers through his election to the American Inns of Court, and he has also been honored by Utah Business Magazine as one of Utah's Legal Elite for the last four consecutive years. Price attended Harvard Law School where he received his J.D. degree, cum laude, after which he clerked for the Hon. Tena Campbell of the United States District Court for the District of Utah. Most recently, Price organized and promoted the 337 Project, an artistic event in which 150 Utah artists were permitted to transform an abandoned building, slated for demolition, into a work of art, after which the building was opened to the public free of charge; more than than 10,000 people attended the 337 Project during its six-day life.

Peter B. Giles, Executive Director, Board Member

Peter Giles has served as Executive Director of The Leonardo, an emerging center for science, technology and art in Salt Lake City, Utah since July 2008. In this role he has focused on building relationships important to the future of The Leonardo with special attention to relationships with Salt Lake City Corporation and past, current and prospective donors and other government officials. Peter is currently on leave from his position as Corporate Partnership Officer of the San Jose Redevelopment Agency, where he advises the agency on developing relationships to stimulate industrial development in San Jose.

Peter has been serving as Executive Director of 'Imiloa Astronomy Center of Hawaii, at the University of Hawaii Hilo, from 2005 through 2008. 'Imiloa is an astronomy exhibit center and planetarium that celebrates Hawaiian culture and Maunakea astronomy for the advancement of knowledge, understanding, and opportunity. Peter has played active roles in education, transportation, land use/housing, and other community issues over the past twenty five years. From 1987 to 2005, Giles served as President of The Tech Museum of Innovation (The Tech), dedicated to engaging people of all ages and backgrounds in the technologies affecting their lives, and inspiring young people to become innovators in the technologies of the future. The Tech opened its prototype facility—The Garage—in November of 1990. The culmination of Giles' involvement in Silicon Valley occurred in the fall of 1998 when The Tech opened its brand new 132,000-square-foot permanent home in partnership with the City of San Jose. In 2004, The Tech hosted 2000 science center and museum professionals in the annual conference of the Association and Technology Centers.

Before coming to The Tech, Giles served as president of the Silicon Valley Leadership (then Manufacturing) Group during its first 8 years. Giles worked with Hewlett-Packard Company founder, David Packard, to set the tone and vision for the organization, which brought together the Valley's leading companies to work with State and local government officials in addressing issues affecting the economy and quality of life in the South San Francisco Bay Area. In 1984, the Manufacturing Group led the county in passing Measure A which generated over $1 billion in funding for completing and upgrading major

highways in the County and set a precedent following by many other California counties since. From 1970-76 Giles was a management consultant with Booz Allen & Hamilton, specializing in assignments to improve the effectiveness of government and public benefit organizations.

Giles served on the board of the Association of Science and Technology Centers (ASTC), and the Giant Screen Theater Association. Giles received the John Gardner Leadership Award in 1999 from the American Leadership Forum—Silicon Valley and was recognized as San Jose Citizen of the Year by the San Jose Boys and Girls Club. Giles received a fellowship from the Center for Excellence in Non Profits to participate in Strategic Perspectives for Non-Profits at the Harvard Business School in 2000. He also served on the board of Joint Venture: Silicon Valley Network, dedicated to positive change through broad collaboration coalitions. He was a fellow of the American Leadership Forum. Giles holds an AB in History from Brigham Young University and a Master of Public Administration degree in urban management from the University of Pittsburgh. Giles recently published an article in the Handbook For Small Science Centers on the transition from a small science center to a large one.

Jeffrey Unruh, Board Member
Jeff is Managing Director at Alerion Capital Group, LLC, a Private Equity firm based in Scottsdale, Arizona. His experience has focused on new business development, strategic alliances, and product/service introduction within the technology industry. Prior to joining Alerion in 2005, Mr. Unruh was Senior Director of Business Development with Oracle Corporation and previously held a variety of positions at Hewlett-Packard, Unisys, Memorex, and Fairchild Semiconductor. Mr. Unruh has been a long time advisor and advocate of technology and of science education. His experience includes nearly ten years as an elected trustee of the Utah Information Technology Association, a member of the Utah Science Advisory Council, the Mountain West Capital Network, the MBA Technology Advisory board of Westminster College, the Dixie College National Advisory Council, an advocate of the Science Learning Network, and a board member of the Utah Science Center. He has a B.S. in Electrical Engineering from Purdue University and an MBA from the University of Michigan.

Suzanne Winters, Board Member, Treasurer, Executive Committee
Dr. Winters is a creative, energetic, and motivated leader with 25 years of diverse experience in consulting, marketing, business management, technology research and development, and strategic planning for businesses, universities and all levels of government. She has exceptional organizational and facilitation skills with proven experience in marketing and business development, new business start-up, technology planning, implementation and assessment. With a strong educational and technology development background, Dr. Winters brings both the breadth and depth of her professional experience to areas ranging from biomedical research, product development and commercialization, to proactive program development, management, marketing, and development of state and federal science policy. Her strong leadership skills have been demonstrated through building consensus among multiple parties with differing agendas and moving productively and cooperatively in a forward direction. Through her experience as the Utah State Science Advisor and subsequent work with economic development organizations, she has a broad array of contacts ranging from federal, state and local government to Utah business and university leaders. With excellent verbal and written communication skills, she provides a strong framework for leading diverse businesses, people, ideas and programs toward cooperative and successful solutions.

Beth Elder, Board Member
Beth Elder, a veteran manager at the Denver Public Library, has been chosen to direct the Salt Lake City Public Library. She succeeds Nancy Tessman, who retired in June after leading the library to its selection as the 2006 Gale/*Library Journal* Library of the Year. Elder, who started her job April 28, 2008 was described in the *Deseret News* by library board president Helen Rollins as, "the quintessential librarian whose vision and inspired leadership will vault us into the future. She's a teacher, she's an inspirer, she's a defender of intellectual freedom and she believes in libraries." Elder, a former bookseller who has worked at the Denver system since 1989, has experience in serving diverse communities, early childhood literacy, and strategic planning. Elder received her BS in Early Childhood/Human Development from the University of Vermont and her MLS (Master's of Library Science) from Emporia University, Kansas.

Tamara Goetz, Ex Officio, Board Member

David Everitt, Ex Officio, Board Member

The Leonardo

A New Way Forward

December 5, 2008

GYROSCOPE INC

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"The Leonardo is an educational and cultural center fusing science, technology, and the arts in experiences that inspire human creativity and innovation."—The Leonardo Mission Statement

PREFACE

The Leonardo: A New Way Forward

This document outlines a new way forward for the exhibition program at The Leonardo. It is feasible, affordable and sustainable. This approach is based on leveraging permanent improvements The Leonardo has already made for the blockbuster exhibition, *BODY WORLDS 3* and builds on the excitement and success of that installation.

With input from The Leonardo's Executive Director Peter Giles and Associate Director Alexandra Hesse, Gyroscope, Inc. has developed this Exhibition Plan with four primary objectives:

- **To emphasize creativity and innovation in science and technology.**
- **To leverage previous exhibit planning and design efforts while addressing a reduced program budget.**
- **To incorporate interactive science exhibits to be leased from the Exploratorium.**
- **To compare The Leonardo's operating profile with other similar science centers in the United States.**

The floor plans, diagrams and renderings on the following pages illustrate a dynamic visitor experience that will appeal to families, young adults, and professionals who value the power of inquiry and imagination to drive an economy fueled by innovation. Although the exhibition budget has been significantly reduced, the program and strategies as listed on the following pages represent a resourceful and responsible solution to this reduction.

At approximately 100,000 sf, The Leonardo at Library Square is ideally suited for a science museum. With minimal building improvements that include seismic retrofit, asbestos remediation and code compliant upgrades, the building as originally designed offers a flexible floor plan, clear circulation patterns, classroom and auditorium spaces, administration spaces and conference rooms, as well as a dedicated area for exhibit development, prototyping, maintenance and storage. It will serve The Leonardo well for years to come.

Together with the Salt Lake Public Library, The Leonardo will complete the vision of Library Square as a civic center that enhances downtown Salt Lake City, and helps trigger urban development in the surrounding area.

The Leonardo | *BODY WORLDS 3* Blockbuster Travelling Exhibition, 2008

Donor Acknowledgements

The Leonardo expresses appreciation to our many, early investing donors who have made our progress and this plan possible. We especially wish to acknowledge the encouragement and assistance of Salt Lake City Mayor Ralph Becker and his administration and the Salt Lake City Council in their efforts to develop a building plan for The Leonardo.

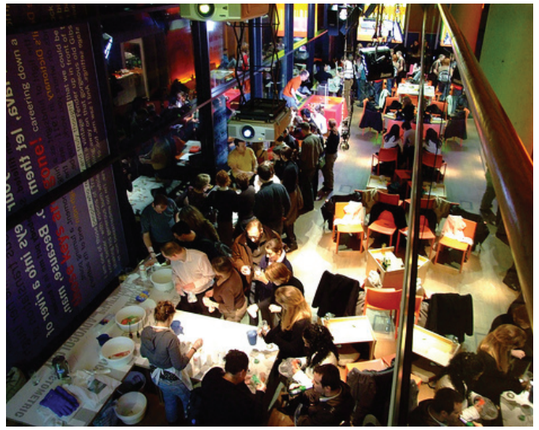
We are grateful to all our donors and especially for the support of George S. and Dolores Doré Eccles Foundation, the O.C. Tanner Company, the Bastian Foundation, and Micron Foundation that has made The Leonardo's progress and this report possible.

The Leonardo would also like to thank all staff and consultants who have contributed to this report.

THE LEONARDO: A CENTER FOR CURIOSITY, IMAGINATION AND CREATIVE INVESTIGATIONS

The Leonardo will be a place that connects people and ideas—a center for community—the hub of a learning community with the potential to spark creative synergy between education and industry throughout Utah.

Olafur Eliasson Installation | SFMOMA



Science Museum, London | Dana Centre

Science Museum, London | Dana Centre

Science Museum, London | Dana Centre

Introduction

Leonardo da Vinci's motto was saper vedere (knowing how to see). Over his lifetime he created some of the world's most beloved and recognized artwork, made ground-breaking scientific observations, and designed fantastic futuristic inventions. His unique genius, however, lay not in the study, or even mastery of so many areas, but rather in his ability to see connections and synergies among seemingly unrelated phenomena, ideas, and disciplines.

Most of us compartmentalize the world and our engagement with it. We divide ourselves into left- or right-brained, artistic or logical, amateur or professional, and we further restrict ourselves within the ever narrower categories imposed by school and work. Leonardo da Vinci showed us what can happen when we reach beyond these boundaries, and in doing so, created a legacy of exploration that continues to motivate and inspire nearly 500 years after his death.

A Place for Connections

Leonardo da Vinci's unmatched ability to cross disciplines and make connections is the inspiration for this one-of-a-kind science center that fuses science, technology and art in innovative ways. The Leonardo will embody the interdisciplinary spirit of Leonardo da Vinci yet in a distinctly contemporary form.

The Leonardo will be a place to learn new skills, try new tools, and discover new ideas. It will be devoted to encouraging innovation **through nurturing curiosity, imagination, and creative investigation and problem solving.**

Camille Utterback interactive installation

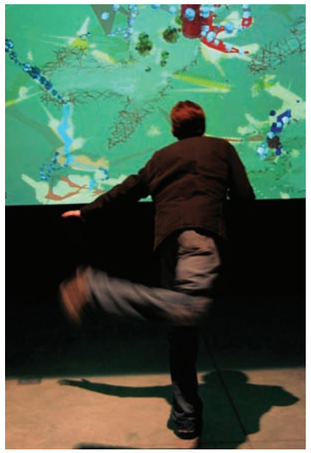
THE LEONARDO: A CENTER FOR CURIOSITY, IMAGINATION AND CREATIVE INVESTIGATIONS

The Leonardo | Body Worlds 3

Creative Thinking and Continuous Conversation

Unlike the formal scientific community, which documents and shares both its research and findings through publications, collections, and other archives, most science centers do not engage their users in a shared dialog or debate about the organization's science offerings. The Leonardo will be different. Through its emphasis on visitor contributions and participation, The Leonardo aims to create a community of learners who will inspire, instruct, and challenge each other as they collectively shape the visitor's experience. It will be a community where users are expected to leave their marks for everyone to experience. It will be a community of creative thinkers in which good questions are valued as much as answers, and conversation happens.

Human learning has always been a thoroughly social process, and recent technology has made sharing that learning with others easier, faster and cheaper. As a new institution emerging at the same time that these trends are coming into focus, The Leonardo seeks to transform the museum model in ways that were impossible only a short time ago.



Camille Utterback

Science, Technology and Art

Throughout The Leonardo, science, technology and art will bump up against each other on a regular basis and in innovative ways. The mix of galleries, interactive exhibits, and workshops will motivate participants of all ages and backgrounds to explore how things work, what they mean, and how they are relevant.

Over time The Leonardo's programs will offer a wide range of topics appealing to many different learning styles. The organization will actively manage the mix of those programs to showcase local talent, technology advances, current research and special international installations such as *BODY WORLDS 3*.

Connected to the Community

The Leonardo will become the catalyst for completing a powerful synergy with Salt Lake City Public Library to make Library Square into the hub of public learning and creative exploration in Salt Lake City. In this role, The Leonardo will be positioned to support and even facilitate Salt Lake City initiatives to stimulate an innovation economy.

As a hub for a learning community, The Leonardo will rely heavily on community partners to complement and extend its own program offerings. Local colleges and universities, corporations, governmental agencies, and non-profit groups will play a critical role in helping The Leonardo provide the richest possible set of learning opportunities. Already The Leonardo has been offering symposia, workshops, lectures and other programming in conjunction with *BODY WORLDS 3*. There is tremendous opportunity right now to build on these existing relationships while at the same time, expanding the type of programming in the permanent facility.

CONCEPT

The Concept: Fusing Science and Art

It is said that new hypotheses in science often occur as a flash of insight or an intuitive feeling, similar to the spark of inspiration most associated with artists. The Leonardo will be a creative partner in the field of science education by bringing together science and technology with art, music, and culture. By fusing art and physics, biology and culture, to name just a few examples, The Leonardo will encourage visitors to explore unexpected connections and important dynamic relationships between disciplines.

The Leonardo will serve as a link to the world of science, technology, invention and innovation and will ignite a passion for science and technology through creativity and invention that lasts long past the visit itself.

Multiple Entry Points

The Leonardo will provide visitors a chance to find new and surprising entry points into science. Visitors will use the creative arts to explore general scientific principles—learning physics through the construction of a kinetic sculpture, using math to compose an original ring tone for a mobile phone, or understanding the human body through drawing and dance. Research shows that the ability to synthesize knowledge across domains lies at the heart of scientific discovery. Seeing how science relates to seemingly unrelated fields can lead to a deeper understanding of how science influences our ability to comprehend and interact with our world.

Whether building a simple robot, using a pinhole camera to take photographs, or experimenting with recycled materials to create sound and music, visitors will develop skills for complex investigations. By learning science creatively, visitors will discover that science is a creative process. The Leonardo will be a place in which to learn how to figure things out, to look for inspiration, and to follow through on an idea.

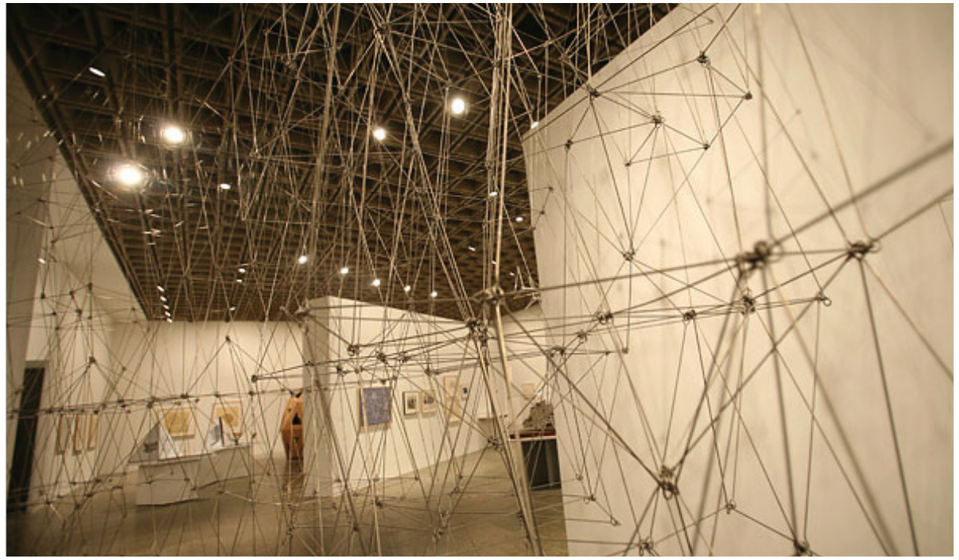
In doing so, The Leonardo will accommodate a wide range of ages, learning styles, interest levels, and state curriculum standards in both science and art education that will appeal not only to Salt Lake City families, but educators throughout the region.

©Gyroscope, Inc.

Maker Faire

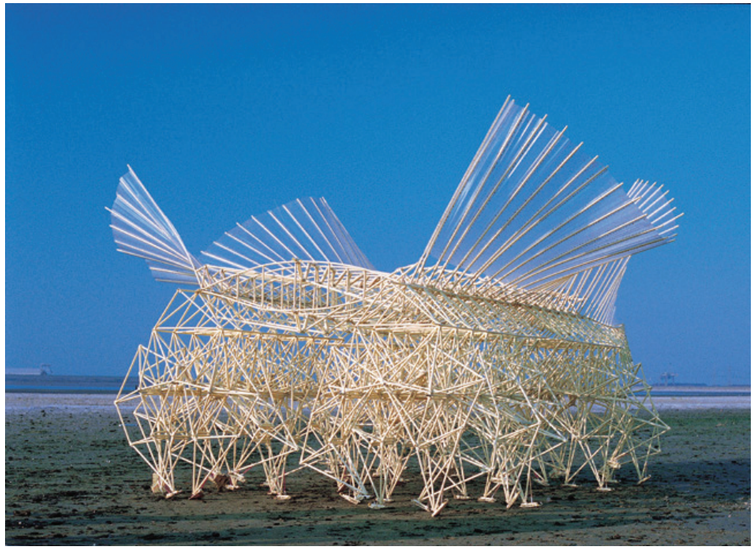
©Gyroscope, Inc.

Maker Faire



Buckminster Fuller Installation

SAMPLE SCIENCE, TECHNOLOGY AND ART SITE SPECIFIC INSTALLATIONS


©Theo Jansen

Ventosa


©Camille Utterback

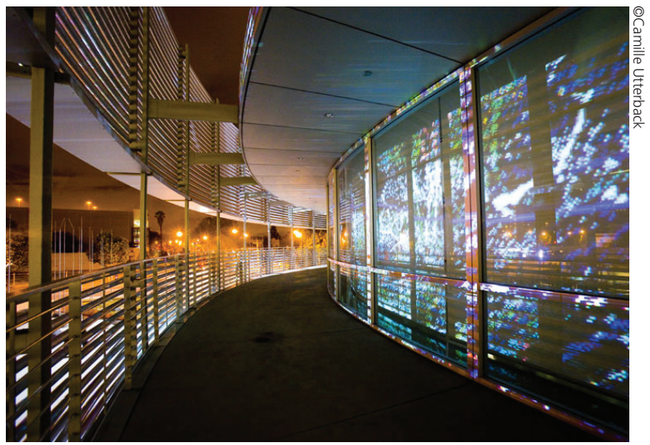
Interactive Installation


©Bruce Cannon


©Bruce Cannon

Treetime detail

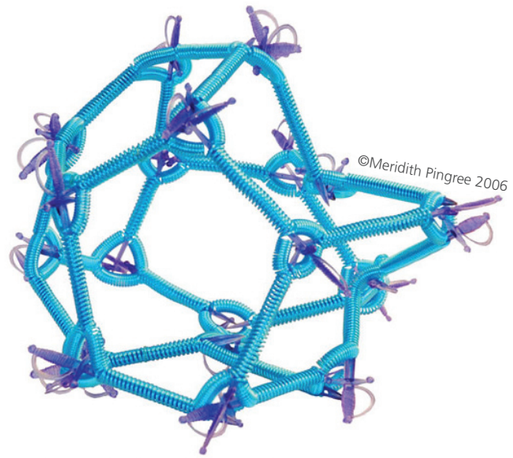
Treetime


©Camille Utterback

Abundance


©Barbara Roux

Wetland Myths


©Meridith Pingree 2006

Blue Sword Coil Bracelet Ice Crystal

CONCEPT

The Visitor Experience

The Leonardo will be a highly interactive place. The exhibits program will feature more than 40 durable and well-proven exhibits leased from the Exploratorium in San Francisco, juxtaposed with art installations by local and national artists. Over time, as the staff gains experience, the exhibits will be replaced by their own originals.

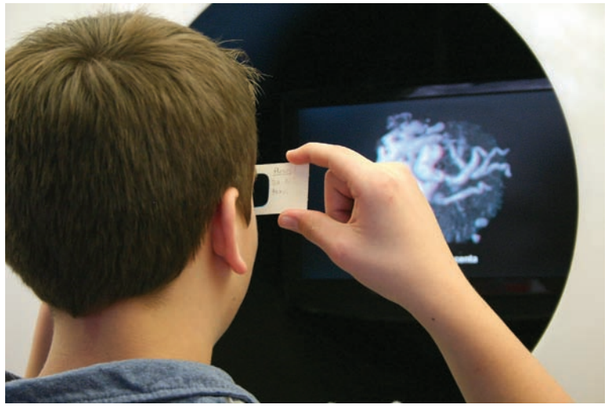
The major zones:

- Invention & Innovation Showcase
- Leonardo's Workshop
- Center for the Big Picture
- Sound and Music
- Flight!
- The Temporary Exhibits Gallery
- Leo on Wheels
- Prototyping Center

In addition, The Leonardo will have embedded workshops, staffed activity and demonstration areas and classrooms to serve the Salt Lake City school group audience.

Recording Studio

Ken Butler Instruments



Youth City Artways

CONCEPTUAL BUBBLE DIAGRAM

CONCEPT

Bringing Together Different Disciplines

The galleries, workshops and site-specific installations will take advantage of collaborations with existing organizations, universities and corporations. Emerging fields and cutting edge technologies find room for expression through university and corporate partnerships. For example:

- **Innovation Showcase:**
  A major installation using leg casts and prosthetics from Otto Bock, a global leader in health care products. Otto Bock has a strong Salt Lake City presence and has met with The Leonardo to discuss this project.

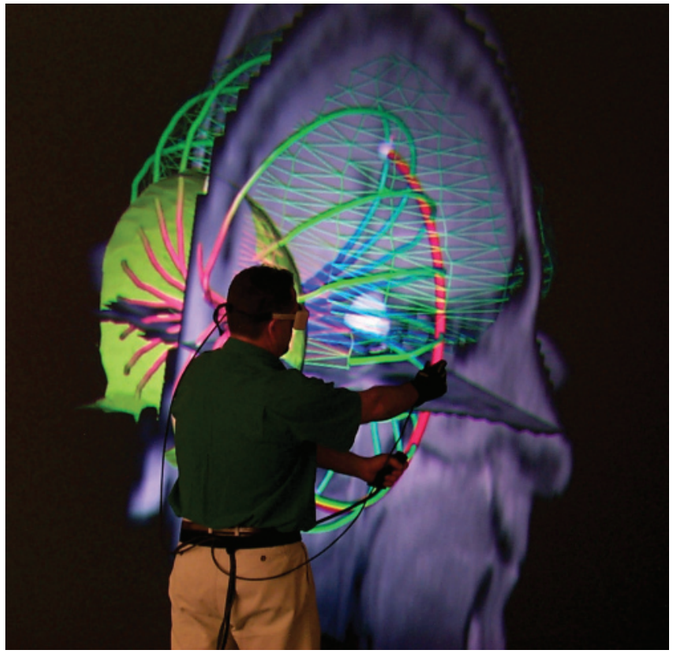
- **Biology meets engineering, invention, science, technology and art.** Here, visitors can experiment with sensors, actuators, and digital control systems, creating robots that respond to and navigate the surrounding environment. The emphasis will not be just on the gadgetry, but on solving problems that demand an understanding of real world phenomena and the application of science and mathematics.

- **Robotics demonstrations, workshops and objects from Sarcos,** one of the world's most innovative research facilities located in Salt Lake City. Sarcos designs and builds advanced robotic systems including a robotic suit for the soldiers of tomorrow.

- **A workshop** modeled on the very successful Art Shack at Sundance Resort offering scientific drawing, chemistry of ceramics, as well as digital tools to explore photography and the computer. These drop-in programs would be offered free as part of the admission fee.

Robot-making Workshop

Otto Bock leg casts



University of Utah Visualization Lab

CONCEPT

"I'm visualizing the big displays and the big things on the walls, and the globe. It would be interesting to change things and see what the outcome would be—the what if's. My kids would like experimenting with that."

—Parent from Focus Group

©Gyroscope, Inc

Other highlights include:

- **Center for the Big Picture.** A major digital platform to display complex data sets such as molecular genetics and evolutionary migration patterns, based on research from anthropologists at the University of Utah and National Geographic. An adjacent demonstration area allows visitors to examine their own DNA, see how genes are expressed through facial traits, and trace their own family history.

- **Sound and Music Gallery.** This gallery will include multimedia tools for visitors to create podcasts, record original music for their MP3 players, iPhones, and original ring tones. The links between physics, math, music, and pattern will be explored through interactive exhibits provided by the Exploratorium's ExNet program.

- **Sound and Music Installation**. A sound installation to be created in conjunction with the School of Music at the University of Utah.

- **Interactive exhibits** on energy, atmosphere and perception are distributed throughout the first two levels of the museum.

© The ExNet

Sound and light exhibit

Kersten Swinyard

Interactive exhibit

Sound and light installation

CONCEPT

- **Theater.** A multi-purpose presentation space. Auditorium programs include presentations by scientists, artists, dancers, writers, and researchers featuring current work, technology, invention and social applications. Live theater and film screenings will also be presented here as well as symposia and special events.

  The auditorium will be upgraded to accommodate live webcasts and streaming video presentations, live demonstrations with participants around the world in areas such as telesurgery and telerobotics. Faculty at the University of Utah's mechanical engineering department are currently working on research and applications in these new technologies.

- **Science Fairs.** The Leonardo will be a major venue for project-based learning and will offer school programs that engage students in conducting their own research and experiments. Local and national science fair competition winners will be displayed here. Other events can include a Leonardo 'Maker Faire', the Kennedy Imagination Celebration, Governor's State Student Recognition Event, Film series, and engineering and robotics challenge competitions.

- **Temporary Gallery.** For traveling and special exhibitions.

- **Classrooms**, including a Flight Simulator classroom, for school groups, teacher training and group reservations.

- **Leonardo on Wheels.** This 5-year old program will continue to expand and serve Utah's students via interactive and motivating science and technology activities and experiences.

photo: Gyroscope, Inc.

Special Exhibition: Klimax Exhibit

photo: Gyroscope, Inc.

Special Exhibition: Klimax Exhibit

photo: Gyroscope, Inc.

Special Exhibition: Klimax Exhibit

THE LEONARDO TODAY

The Leonardo Today

The Leonardo's mission to fuse science, technology and art in experiences that inspire creativity and innovation is at the frontier of where science education is moving toward today. This unique program will attract to Salt Lake City, those individuals, families and businesses who can help to create and build on Utah's and the city's brand as an Innovation Economy.

The Leonardo will foster curiosity and creativity in students, teachers and adults alike and offer a platform for the exchange of new ideas in downtown Salt Lake City.

How will The Leonardo accomplish this?

- By becoming a hub for community learning, connecting The Leonardo and The Library
- By serving as an inspirational learning resource in science, math, technology integrated with the arts
- By facilitating partnerships with the schools, the City and others to support and spearhead community learning initiatives
- By partnering with University resources to enrich interactions with the public, teachers and students
- By being a gathering place for the out of box thinkers and doers that can stimulate innovation synergy and reputation
- By providing a forum for public outreach for USTAR and other researchers
- And by connecting Utah's most innovative companies with the public and schools to illustrate how technology and science are relevant

Kersten Swinyard

School Field Trip activities at The Leonardo

Goals

- To Promote Science and Technology Literacy
- Strengthen Region's Reputation as a Leader in Innovation Economies
- To Connect Utah's most Innovative Companies with the Public and Schools
- Be a Community Gathering Place

The Leonardo's institutional values:

- Inspiration
- Creativity
- Innovation
- Invention

Kersten Swinyard

School groups at Body Worlds 3 at The Leonardo

SALT LAKE CITY TODAY: THE OPPORTUNITY– NOW IS THE TIME

Salt Lake City Today

As with all educational institutions The Leonardo seeks to offer transformative experiences, to open minds, and to inspire creativity and innovation for people of all ages and backgrounds. The Leonardo is a gathering place that celebrates Salt Lake City today as the center of Utah's innovation economy.

Salt Lake City is ready for an interactive science and technology center. The Leonardo will provide visitors new perspectives through interactive exhibits, site specific art installations, hands-on workshops, classes and unique travelling exhibitions.

©Gyroscope, Inc.

GE Surgery Navigation Demonstration

Key Partners

The Leonardo has the opportunity to be an important partner with other formal and informal educational stakeholders in the city, with special emphasis on elementary, middle and high school ages, throughout the state and the intermountain west.

The Leonardo is already working closely with the Governor's USTAR initiative in the Lunch with Leo lecture and discussion series, in exhibits for Leonardo on Wheels, and in special programs related to science and engineering manpower development.

The Leonardo, with its partner The Utah Science Center, has launched a three year program with the State's Division of Work Force Services on STEM (science-technology-engineering-math) related activities and career information.

Economic Development

Science centers have become important cultural and economic components of the civic landscape of many cities around the world. In other cities these museums are key partners with local school districts, libraries and other cultural organizations. Science centers are family-oriented gathering places where communities meet and share learning experiences. It is well established that science centers:

- Help young people **develop essential foundational skills.**
- **Spark a joy of discovery** and lifelong learning.
- **Offer Environments where families connect** in meaningful ways.
- **Bridge formal education** and informal learning.
- **Leverage community resources.**
- **Contribute to local economies** and revitalize downtown neighborhoods.

Potential Key Partners:

The Leonardo is already actively working with these partners:

- Salt Lake City Public School District
- Local Universities and Colleges
- The Salt Lake City Public Library
- Local Corporations
- Local Cultural Organizations
- SLC Film Center
- Plan B Theatre
- Movement Forum Dance Company
- School of Education and College of Humanities at the University of Utah
- Sundance Film Festival
- The Sorenson Unity Center

"The Leonardo is an educational and cultural center fusing science, technology, and the arts in experiences that inspire human creativity and innovation." —The Leonardo Mission Statement

AUDIENCE

Audience at The Leonardo

The Leonardo will serve many audiences, but the most important will be families and young people of all ages, with a focus on ages 10 and up. The Leonardo will offer exhibits and programs specifically designed to meet the needs of these age ranges. Strategies include flexible, multi-modal spaces that can be used for different audiences at different times, staffed workshops, demonstrations and special programming.

Kersten Swinyard

Leo Zone at Body Worlds 3 at The Leonardo

Learning Together

Numerous museum researchers have pointed out the importance of the social setting in understanding how visitors use museums. Informed by the latest research in learning theory, The Leonardo's programs and exhibits will be designed to support social learning experiences among family and friends in which learners of differing ages, experiences, and abilities can help each other.

The museum's environments and furniture will be designed to accommodate a wide range of visitors and to allow family groups to stay together as they experience the museum. Quiet places to sit and relax will be integrated with the more active spaces typical of most science centers.

Secondary Audiences

- **Tourists.** Although primarily designed for local residents, The Leonardo will also attract out-of-town visitors.
- **Convention/Conference Groups**. The Leonardo is in a free fare UTA zone with great access to and from the Convention Center.
- **School Field Trips.** School groups will make up a significant portion of total on-site attendance at the museum, and the museum will need to accommodate their curriculum requirements. The majority of school groups will be local in that they can make the visit in one day, including schools visiting beyond the Wasatch Front.

School field trips vary seasonally. Visitation is bimodal, beginning in late September/early October, and peaking in late November, only to go back down during the December/January holiday period. In March/April, school group visitation begins again and peaks in early May. The Leonardo will be prepared to adjust its programming to accommodate changes in year-round school schedules.

In order to serve school groups effectively, the Museum will provide classrooms on the third floor where school children can assemble for special programs. These classrooms can also be used for in-service training programs for teachers.

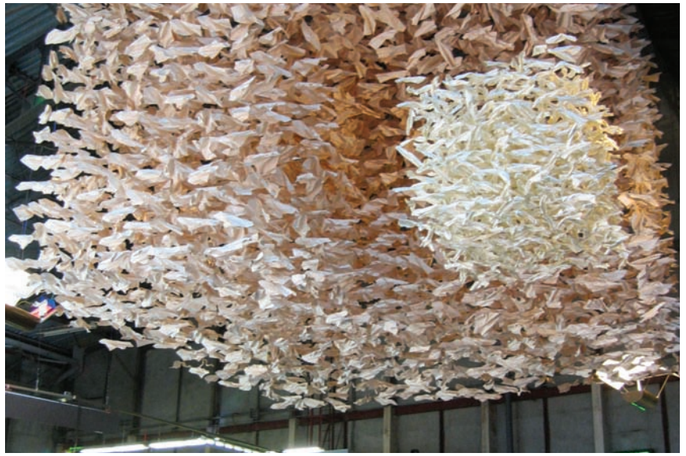
Curriculum Connections

Aligned with the state educational frameworks, The Leonardo's exhibits and programs will support the curriculum's major goals. Please see the curriculum connection charts on pages 32-35.

Guiding Principles

- A science resource for the community
- A place where visitors learn by doing, rather than by watching or listening
- A place where families learn together, with activities that will appeal to a broad range of ages
- A rich resource for schools and teachers
- A place that celebrates and allows visitors to participate in the joy of discovery
- A source of pride for the community
- A community gathering place to draw visitors
- A financially sustainable organization

THE EXPLORATORIUM NETWORK FOR EXHIBIT-BASED TEACHING (EXNET)



Art Installation at the Exploratorium

Oscylinder Scope exhibit

Bernie Lubell Exhibit

The Leonardo's New Way Forward described in this report is made possible in part by a collaboration with San Francisco's world-famous Exploratorium. The Exploratorium has long been an international leader in developing outstanding interactive science exhibits. The Leonardo will take advantage of the Exploratorium's expertise and record of success by leasing a set of more than 40 exhibits from the ExNet program, described below.

This relationship with the Exploratorium helps to assure The Leonardo's success in two ways: first, the expense of leasing ExNet exhibits is far lower than would be required to purchase or create similar displays, making possible a program that is both powerful and affordable and second, the Exploratorium's displays provide a solid platform upon which to build. Over the next several years, as The Leonardo gains experience, the Exploratorium exhibits will be replaced by original displays created by and for The Leonardo itself.

Transforming Science Education

With its founding in 1969 the Exploratorium pioneered an entirely new conception of what a science museum could be: the Exploratorium literally built itself. Over the years, Exploratorium scientists, artists, and teachers have developed a fascinating collection of over 600 interactive exhibits representing a full array of scientific phenomena. Quirky, imaginative, and engaging, the museum's exhibits offer visitors of all ages and backgrounds a sense of fun and discovery backed up by real science and real learning. The establishment of the Exploratorium Network for Exhibit-Based Teaching (ExNET) in 1998 opened a new world of exhibit-based learning.

As part of a growing network of museums throughout the country, participants in ExNET benefit from the high quality of Exploratorium exhibits backed by educational programs and opportunities for professional development and exchange.

ExNET Partner Cases:

- A natural history museum used the ExNET partnership to transform into a hands-on center.
- An art museum used the ExNET exhibits as a part of their commitment to providing hands-on experiences exploring the intersection of art and science.
- A new, 12,000 sf science center is using the ExNET partnership as the main exhibit collection in their remodeled facility. Their professional development series will focus on developing a foundational education plan for their facility, including developing relationships with their school districts, developing a base of frontline exhibit interpreters, and revenue-generating programs.

How ExNET Works

ExNET partners lease sets of Exploratorium exhibits focused around thematic areas in the sciences, mathematics, and the arts. Partners commit to a specified contract period, usually three years, during which they receive sequences of exhibits sets for temporary exhibition, along with technical support, and a spectrum of educational services such as public education workshops, teacher institutes, professional development sessions, and capacity-building counsel.

Exhibits. Exhibit sets consist of 35–40 exhibits comprising three to four themes each, such as Sound and Hearing. The exhibits connect readily to local, state, and national science and math education frameworks for classroom learning. Partner museums use the exhibits to support school programs, field trips, and teacher training.

Education. Exploratorium staff provide ExNET partner museums with 30 on-site training and consulting days over the three-year contract period. ExNet partnerships also include exhibit installation and technical support so that exhibits require only maintenance from the partner sites.

Network. Participation in ExNET offers museums solid educational resources and significant assistance with institutional advancement. For smaller and start-up museums, the status of the Exploratorium association can provide a major step forward.

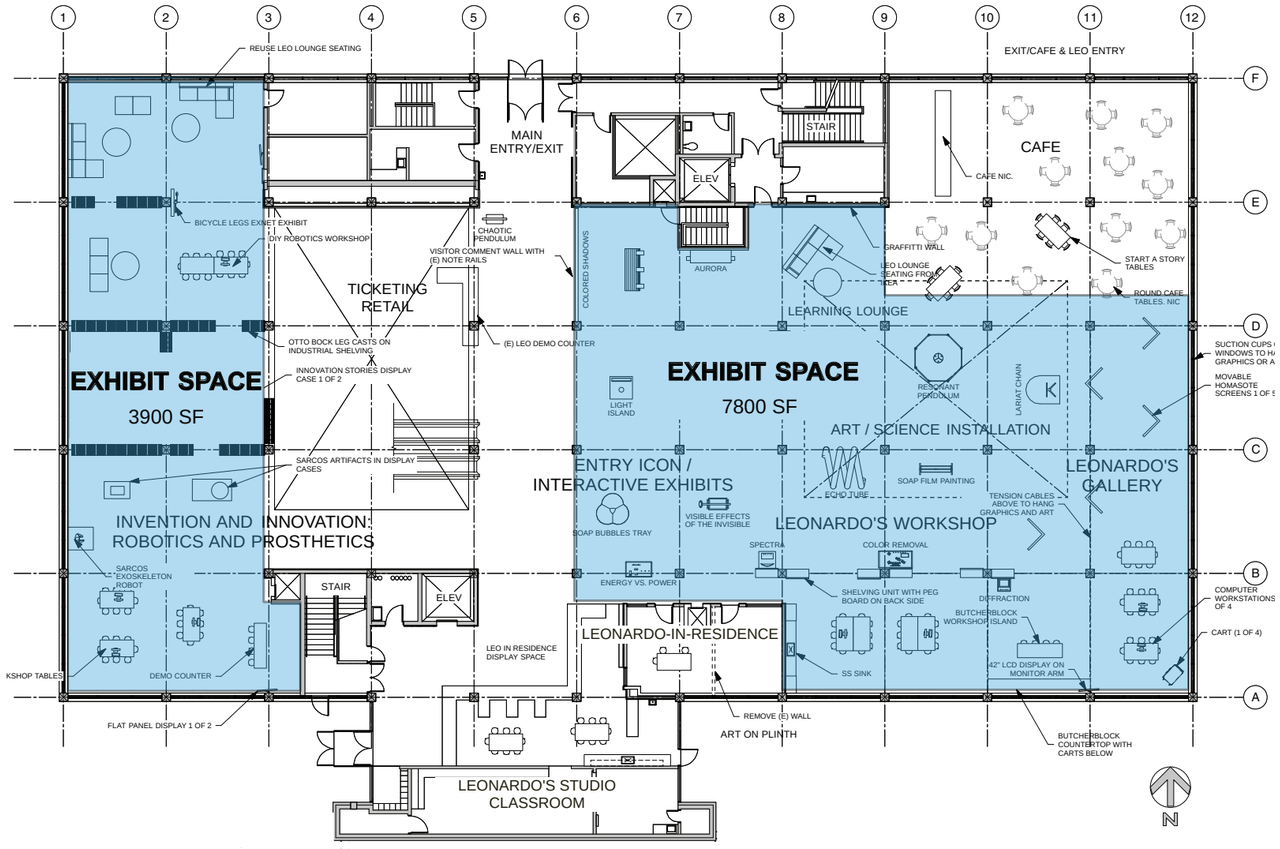
PROJECT AT A GLANCE

The Museum's Operating Profile

The table below represents attendance data from seven science centers generally similar in size to The Leonardo. Although none of these is an exact model, Gyroscope believes that it is reasonable to assume that The Leonardo will fall within the range of these benchmark institutions. Please see Operating Profile on pages 40-43 for a full explanation.

Institution	Exhibits Square Feet	2007 Attendance
Adventure Science Center	21,541	251,682
Discovery Science Center*	26,000	420,336
Explora	20,000	187,566
Impression 5	26,000	75,598
Lawrence Hall of Science	30,000	222,592
Museum of Discovery	25,000	91,790
Sci-Works	30,000	100,291

*Discovery Science Center added a new 10,000 sf outdoor exhibit in 2007 and their attendance has increased dramatically as a result. Attendance for 2006 was 268,054.



FLOOR 1

PROJECT AT A GLANCE

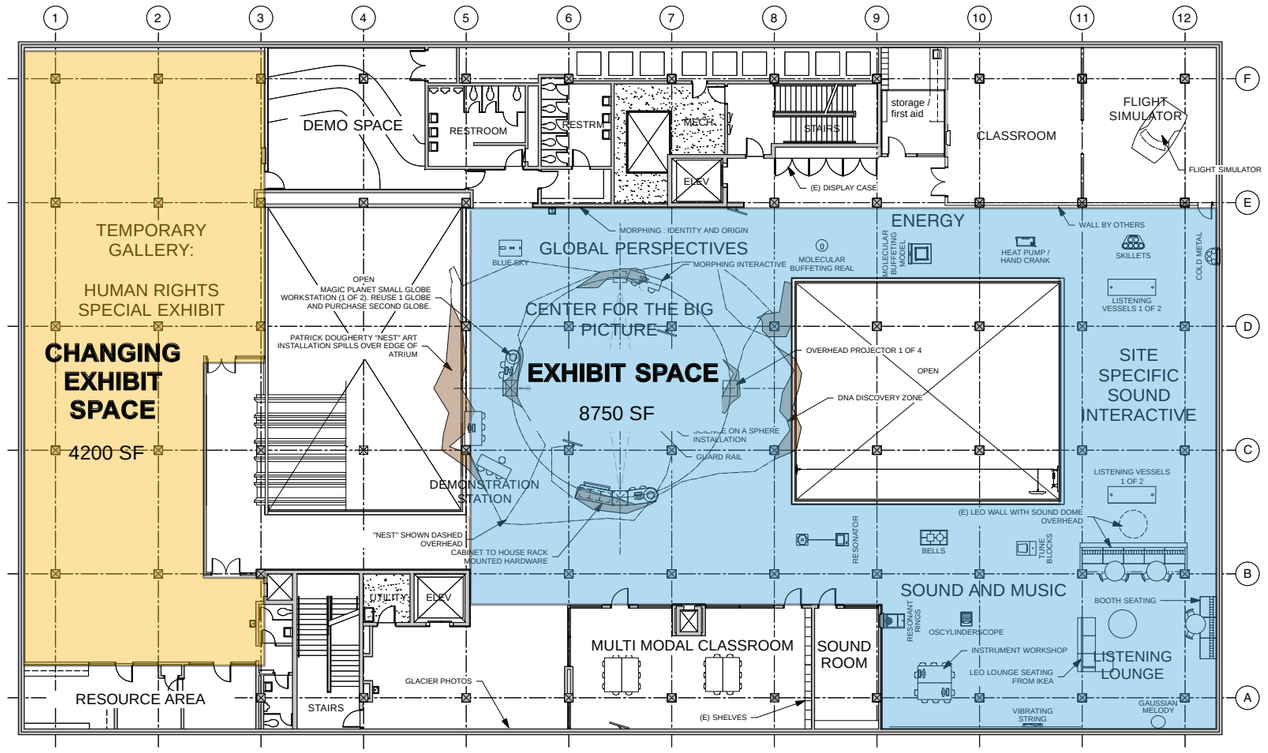
Site:	LIBRARY SQUARE
Building:	100,000 SF Total
Program:	24,000 SF
Audience:	Families
Mission:	Fusing science and art
Key Strategy:	Science and Art installations
Stable Attendance:	125,000

Schedule

	Time Period	Dates
Exhibit Design	7 months	January 2008 - August 2009
Bidding and Contracting	2 months	September - October 2009
Fabrication	8 months	November 2009 - July 2010
Installation	1 month	August 2010
Soft Opening & Shakedown	1 month	September 2010
Grand Opening		October 2010
Post-Opening Evaluation	1 month	November 2010

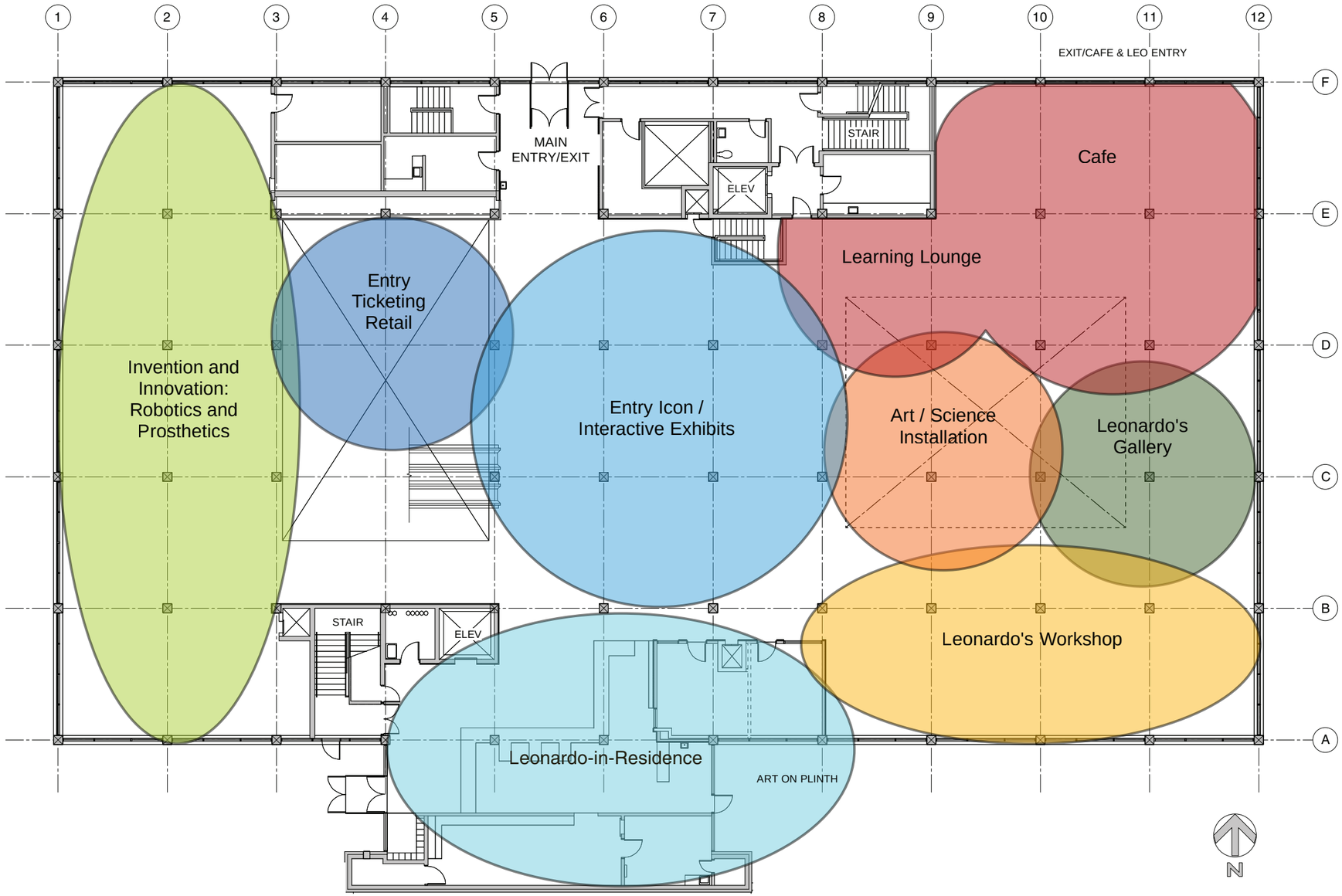
Exhibit Area Take-offs:

First Floor	11,700 Sf
Second Floor	12,950 Sf



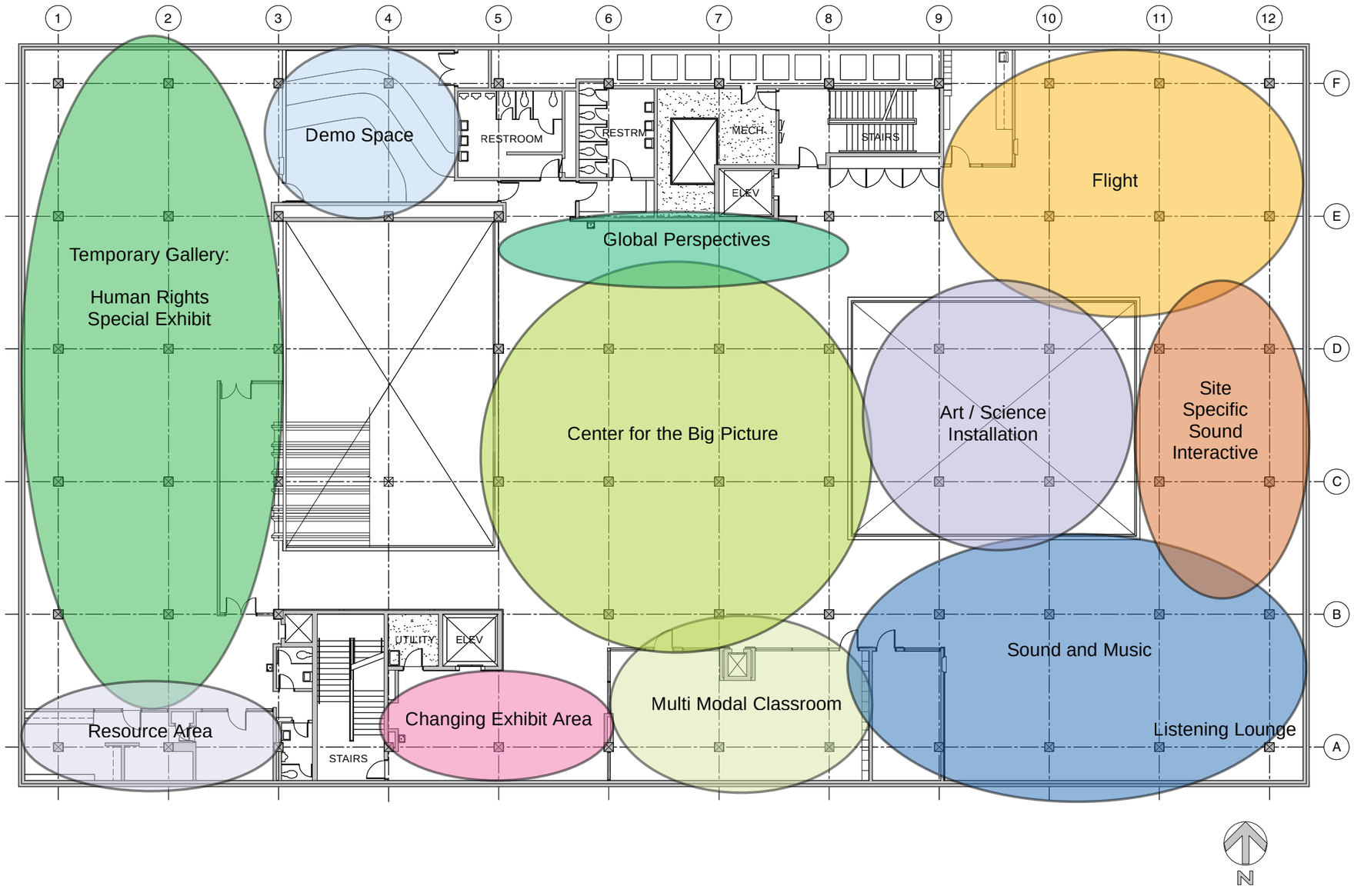
FLOOR 2

BUBBLE DIAGRAMS



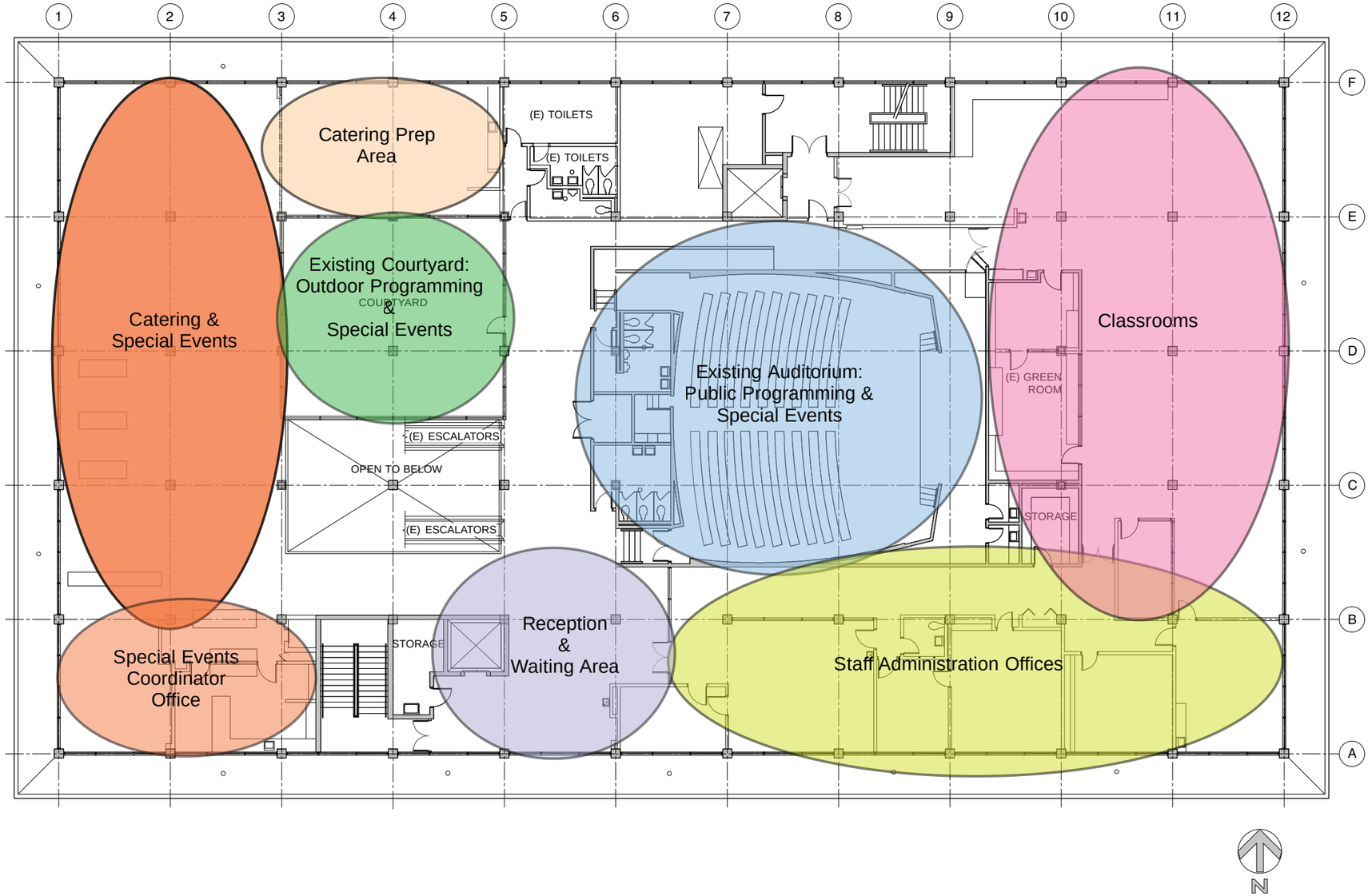
FLOOR 1 - BUBBLE DIAGRAM

BUBBLE DIAGRAMS



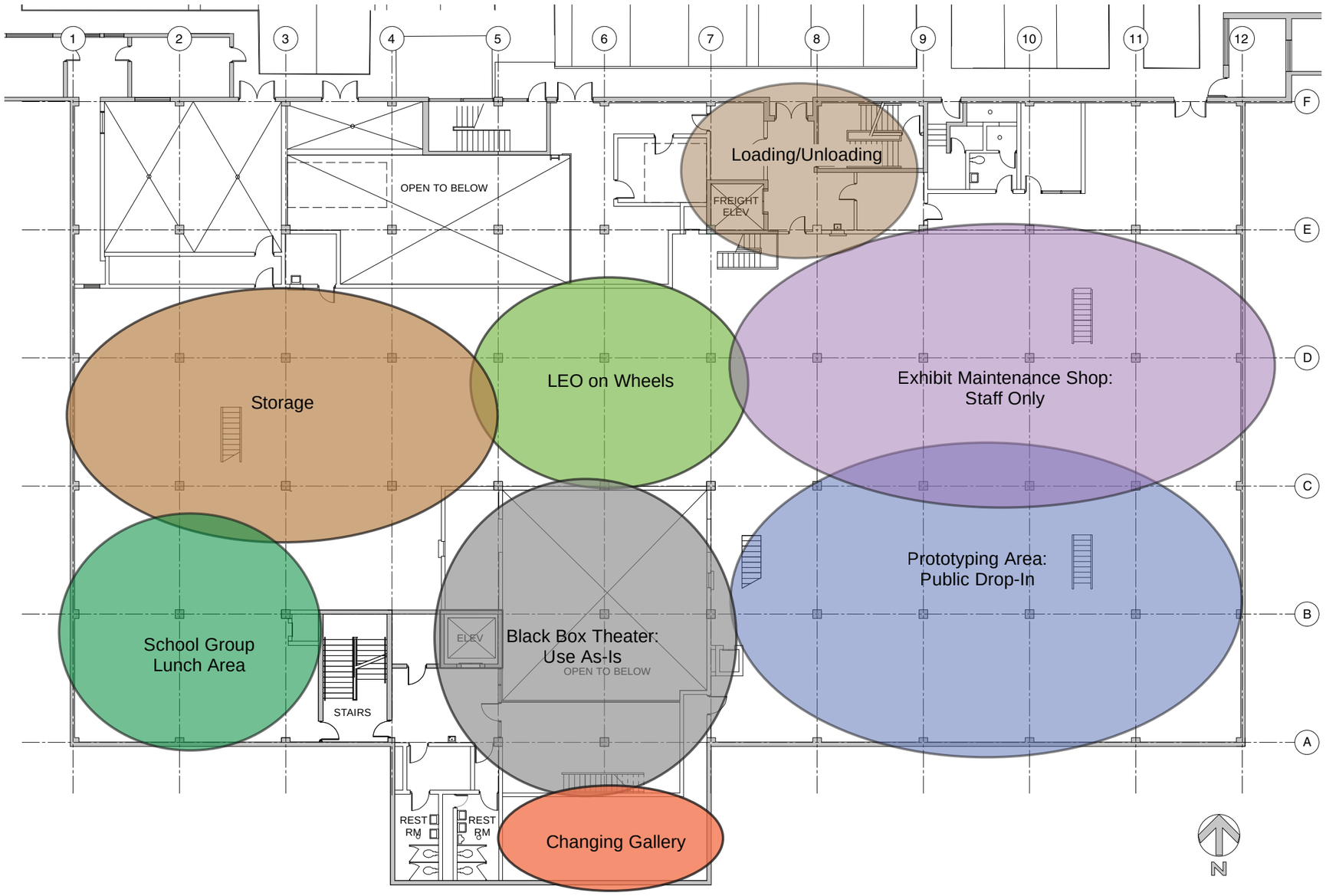
FLOOR 2 - BUBBLE DIAGRAM

BUBBLE DIAGRAMS



FLOOR 3 - BUBBLE DIAGRAM

BUBBLE DIAGRAMS

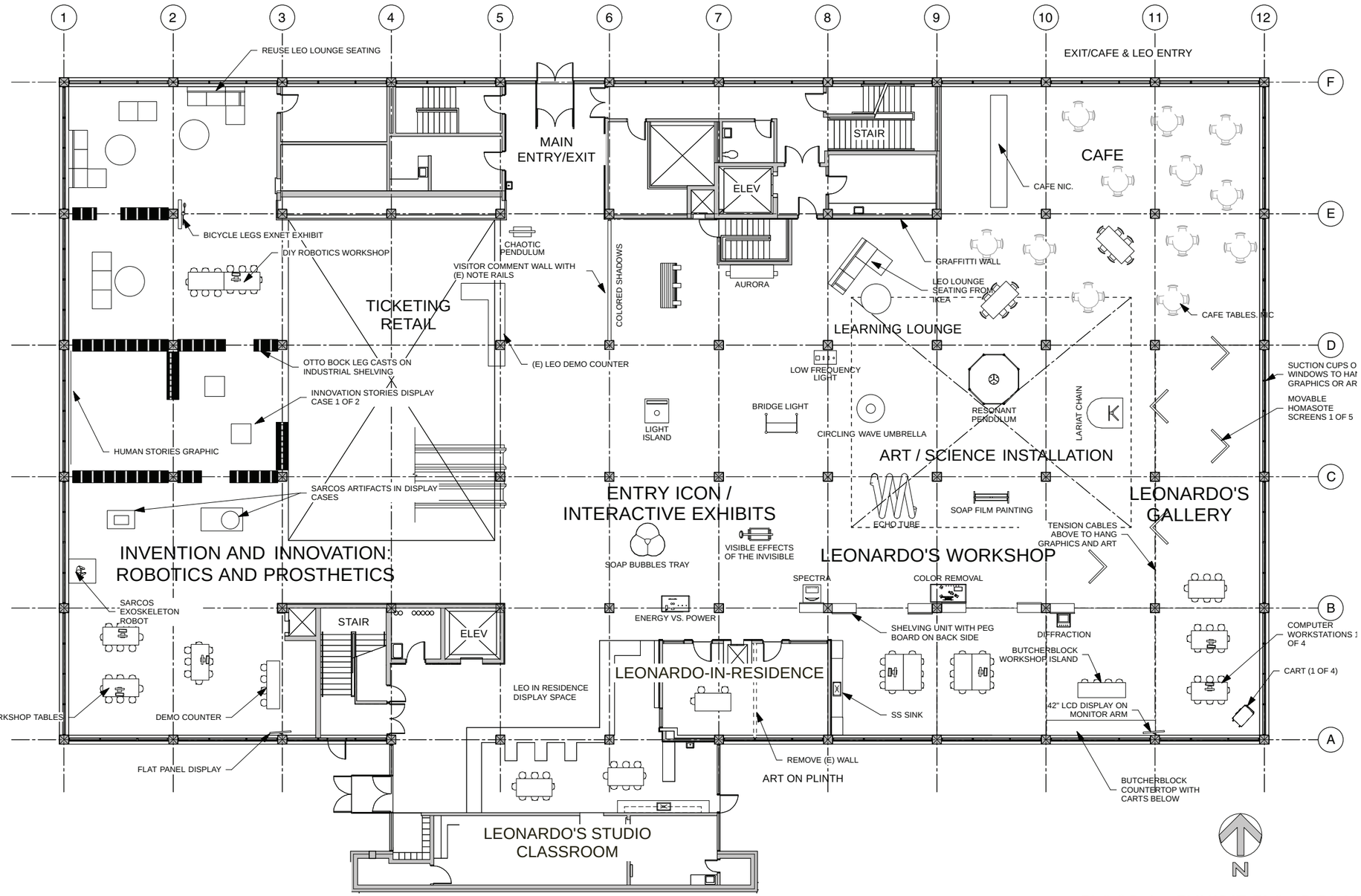


FLOOR B1 - BUBBLE DIAGRAM

BUBBLE DIAGRAMS

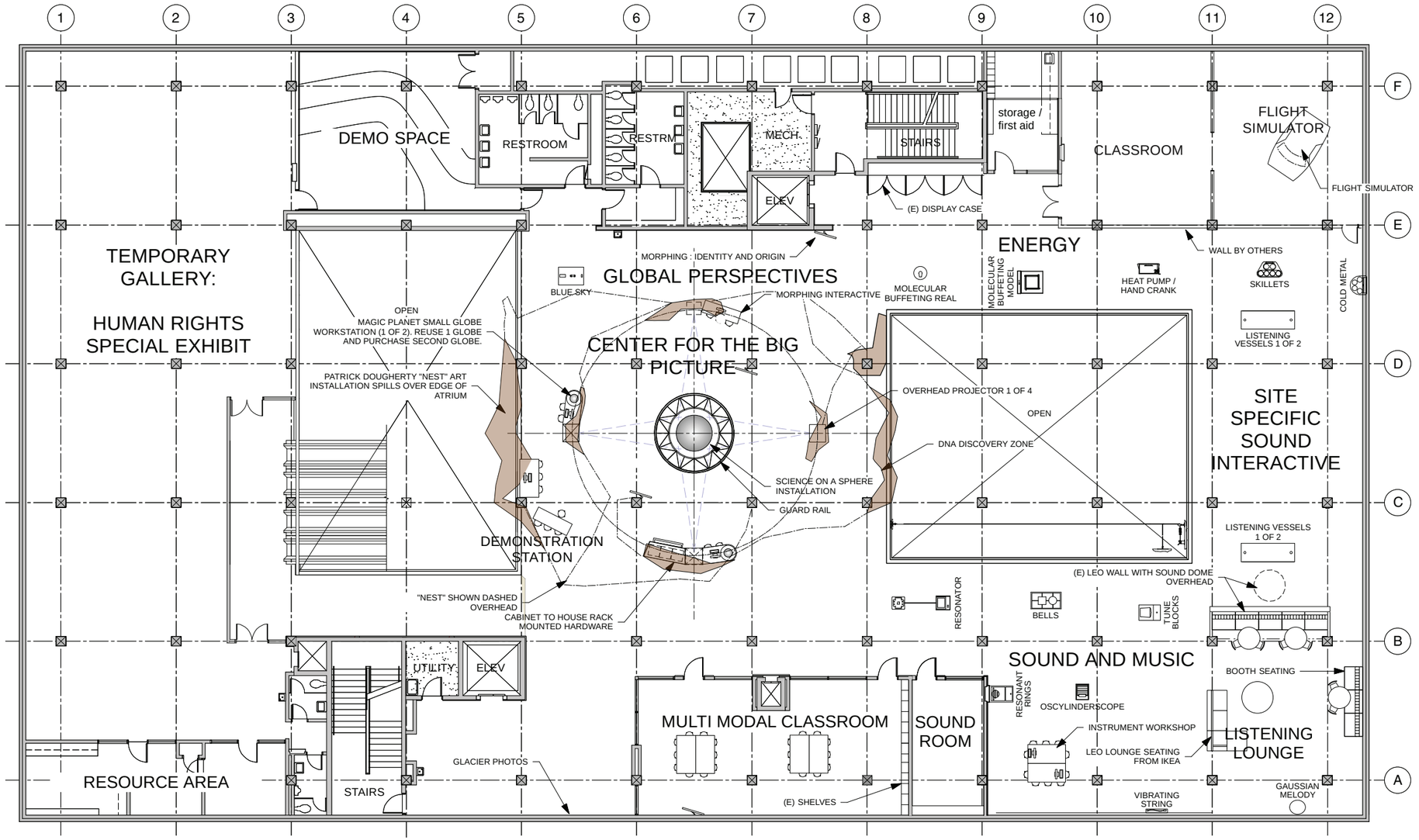
FLOOR B2 - BUBBLE DIAGRAM

EXHIBIT FLOOR PLANS



FLOOR 1 - EXHIBIT FLOOR PLAN

EXHIBIT FLOOR PLANS



FLOOR 2 - EXHIBIT FLOOR PLAN

RENDERINGS

Rendering © Gyroscope, Inc. 2008

MUSEUM ENTRY

Arriving visitors purchase tickets at the Entry Desk while those on their way out contribute to the comment wall. Views of the Innovation and Invention gallery and the interactive robotic blimps beyond.

RENDERINGS

ART & SCIENCE

A kinetic art installation by Meridith Pingree responds to visitors in the space.

RENDERINGS

Rendering © Gyroscope, Inc. 2008

INNOVATIONS SHOWCASE: ROBOTICS

Leg casts from local company Otto Bock with hands-on workshop activities, robot demonstrations, and the Exploratorium's interactive Bicycle Legs exhibit in the background.

RENDERINGS

Rendering © Gyroscope, Inc. 2008

LEO'S WORKSHOP

Drop-in workshop activities include chemistry and ceramics, color theory, photography, and scientific drawing as examples.

RENDERINGS

Rendering © Gyroscope, Inc. 2008

CENTER FOR THE BIG PICTURE: GENETIC MIGRATIONS

NOAA's Science on a Sphere digital projection system. In the background is a display of human migration through time. Visitors can track their own ancestral migration on the small globe workstations.

RENDERINGS

SOUND AND MUSIC

Sound and music Exploratorium exhibits, instruments by Walter Kindutu, sound art installations, and the Digital Sound Lounge.

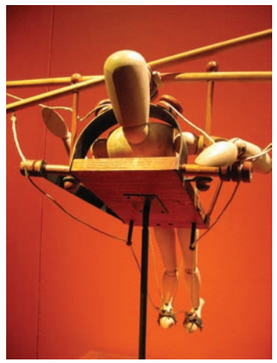
RATES OF CHANGE

Designed for change and sustainability

The Leonardo's design will accommodate change at different scales and frequencies ranging from turnover of major galleries to site specific science, technology and art installations throughout the building. The Leonardo will rely on rented and leased exhibitions from the Exploratorium's ExNET program and other museums with traveling exhibits.

		Majors Month Year	Opening																Blockbuster																			
			June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec						
			2010							2011															2012														
Space	**Floor**	**Typical rate**																																				
Special Exhibits Gallery	1	6-12 mos	Invention and Innovation: Robotics and Prosthetics																Blockbuster																			
Entry Gallery	1	12 mos	ExNet: Optics																Blockbuster						ExNet:													
Art/Science Installation	1,2	6-8 mos	Meridith Pingree																Blockbuster																			
Leonardo in Residence	1	1-3 mos																																				
Leonardo's Gallery	1	1-3 mos																																				
Leonardo's Workshop	1	3-5 years																																				
Temporary Gallery	2	3-6 mos	This Little Light of Mine							Race									Blockbuster																			
Changing Exhibit area	2	1-3 mos																	Blockbuster																			
Global Perspectives	2	1-3 mos	Glaciers																Blockbuster																			
Center for the Big Picture	2	3-5 years																																				
Sound and Music Workshop	2	3-5 years																																				
Sound and Music Exhibits	2	12 mos	ExNet: Sound																ExNet: Sound II																			
Sound Gallery and Music Installation	2	1-6 mos																	Blockbuster																			
Flight Classroom	2	3-5 years																																				

Leonardo da Vinci travelling exhibit



Leonardo da Vinci travelling exhibit

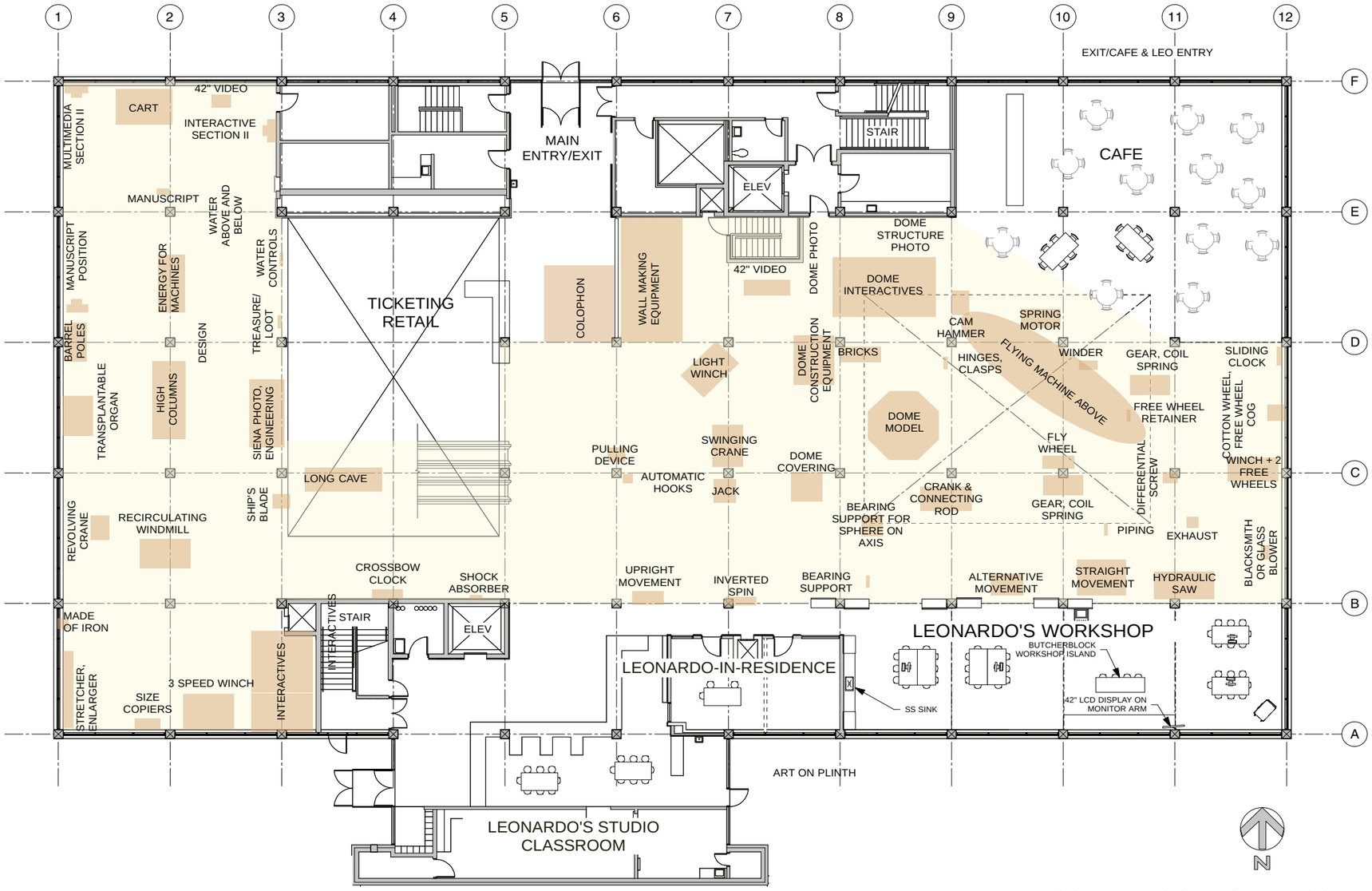
© Roryrory, Flickr

Vitra Museum | Buckminster Fuller Geodesic dome

© David@UNT, Flickr

The Henry Ford Museum | Buckminster Fuller's Dymaxion house

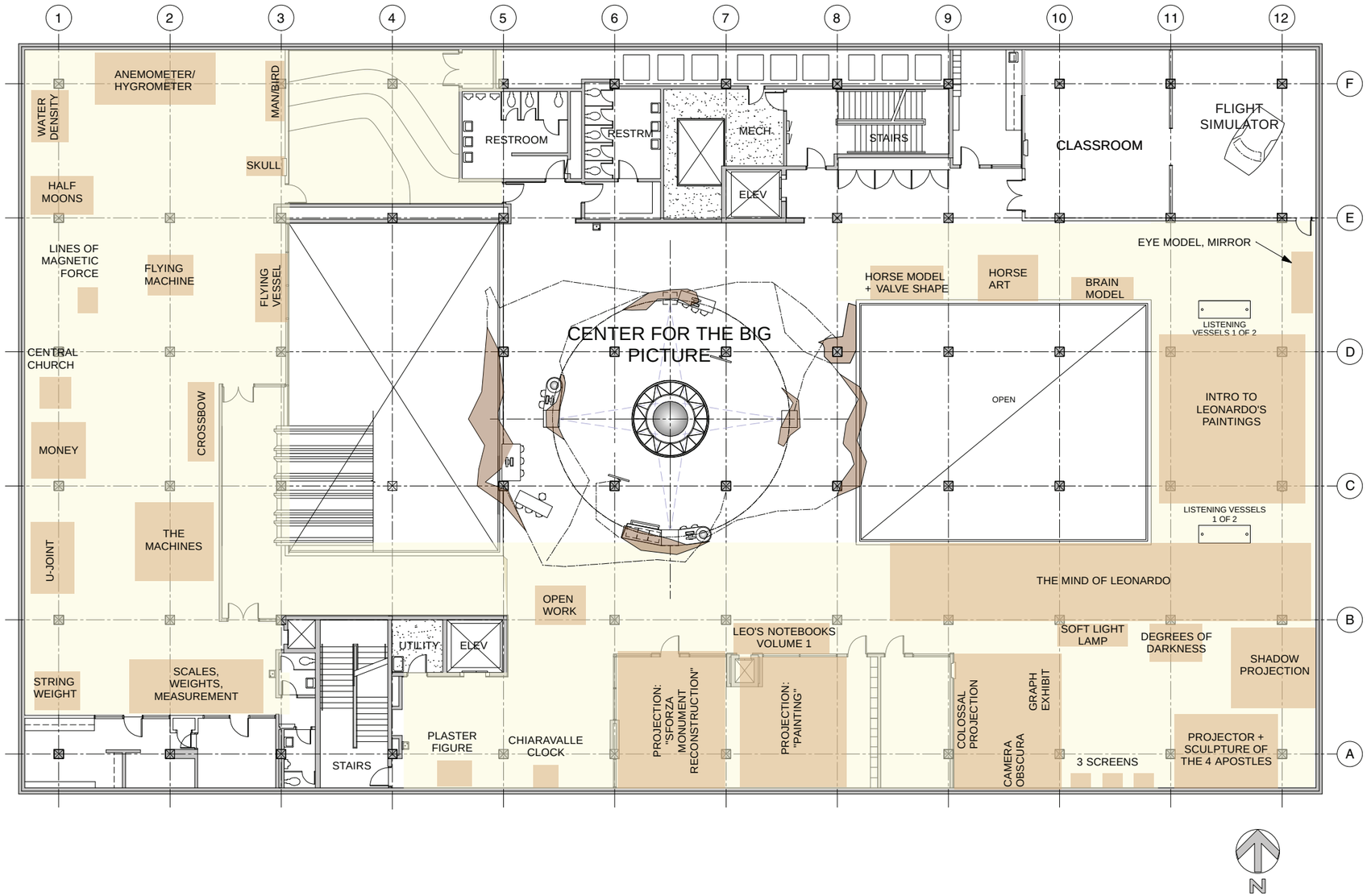
BLOCKBUSTER EXHIBIT PLANS



FLOOR 1 - BLOCKBUSTER FLOOR PLAN

LEONARDO DA VINCI TRAVELING EXHIBITION

BLOCKBUSTER EXHIBIT PLANS



FLOOR 2 - BLOCKBUSTER FLOOR PLAN

LEONARDO DA VINCI TRAVELING EXHIBITION

THE LEONARDO AND THE SCHOOLS

The Leo Learning Lab

An Innovation Community for Utah's Students and Teachers

The Leo Learning Lab combines The Leonardo's core values of inspiration, creativity, innovation, and invention with best educational practices to provide an innovation community for Utah's students and teachers. Central to its activities is its support for Utah's standard curriculum goals in science, technology, engineering, and mathematics (STEM). Designed for students in grades 3-12 and their teachers, the Leo Lab provides student field trip experiences and teacher training workshops for professional development. With the Leonardo on Wheels traveling program, the Science Fair, and the Leo Online network, The Leo Lab serves as the physical center of a vibrant statewide learning program.

Field Trips

Students as Innovators

Core Exhibits: Wonder inspires learning and innovation. First-hand experiences with The Leonardo's interactive ExNet exhibits, installations, and traveling exhibitions spark student curiosity. As both cognitive and emotional door openers to innovation, they provide the foundation that generates student questions and the need to know and understand.

> Exhibits, unlike textbooks, often make strange things familiar and familiar things strange. Museums provide connections in people's lives, reward creativity, and encourage healthy questioning. They become an oasis for integrating students' lessons into practical applications and a place that features such efforts within the community. They guide and substantiate the efforts of young as well as experienced teachers and assist them in creating meaningful classroom experiences.
>
> — David Hawkins

Interdisciplinary Approaches: Innovation relies on the ability to see things in new ways. It requires providing students with diverse experiences and pathways for understanding concepts and gaining knowledge. Through hands-on field trip experiences, students will have the opportunity to connect core STEM learning with investigations and projects fueled by the arts.

Kersten Swinyard

School groups at Body Worlds 3 at The Leonardo

Inquiry-Based Investigations: Innovation begins with a question. In The Leonardo's workshops and classrooms, students learn by doing based on their own questions. In their inquiry-based investigations they refine their questions, develop plans for finding answers, apply information, experiment, test, and use technology and the arts to communicate new understanding.

Real World Connections: Innovation mentors inspire young people to consider their own role in the bigger world. Field trip experiences in the Leo Learning Lab environment introduce students to working artists, scientists, and engineers. These innovators in residence provide students with demonstrations and dialogue that ties real world work with the excitement of learning and growing into future careers.

Sharing Knowledge: The Leo Learning Lab Community provides students with both a physical and virtual way to share their innovative projects. Student project exhibits will be featured in the building and presented to a larger audience through on-line galleries. On-going events and competitions will further highlight student work. The memory of the field trip and workshop experience will continue as students participate as innovators within a community of learners.

Teacher Workshops

Teachers as Innovation Mentors

The Leo Learning Lab workshops support teachers as individual innovators and as skilled mentors who can capably inspire and guide student learning and innovation. The ExNet Exploratorium partnership serves as the foundation for dynamic teacher training experiences in interdisciplinary STEM learning, and the inquiry-based learning process. Educators in the Leo Learning Lab program are not just taught how to teach a concept like light but first become participants in an investigation of the phenomena through personal experience and application. They gain experience in tying core content to inquiry modeling working with mentors and other teachers in a collaborative learning lab environment. Workshop experiences will be offered to practicing teachers throughout the year for in-service credit. The Leo Learning Lab will also serve as a lab for emerging teachers through partnerships with local Universities.

CURRICULUM CHARTS

Charts on the following pages map The Leonardo's exhibit and workshop program to Utah's science and arts curriculum for grades 3-12. As these demonstrate, there are many opportunities for The Leonardo to support teachers, partner with schools, and serve as a resource for formal education.

Kersten Swinyard

Leo Zone at The Leonardo

Science is a way of knowing, a process for gaining knowledge and understanding of the natural world. The Science Core Curriculum places emphasis on understanding and using skills. Students should be active learners. It is not enough for students to read about science; they must do science. They should observe, inquire, question, formulate and test hypotheses, analyze data, report, and evaluate findings. The students, as scientists, should have hands-on, active experiences throughout the instruction of the science curriculum.

—Utah Science Core Curriculum, Earth Systems Science, Biology, Physics and Chemistry, p. 3

Kersten Swinyard

Leo Zone at The Leonardo

CURRICULUM CHARTS

Utah Science Core Curriculum grades 3-6

Utah State Office of Education Core Curriculum 3-6	Question, Observe, Predict	Sort and Sequence data	Compare things and events	Sorting and Classifying	Plan Designs or Experiments	Make Models, Charts and Graphs	Record and Communicate findings	Consider alternative points of view	Relate and Apply Scientific Knowledge to World Around	Problem Solve	Approaches to scientific inquiry	Science and the Environment	Dynamics of living systems	Simple Machines	Cause and Effect	Understand Change over Time	Knowledge of the local environment	Forces that Shape the Earth	Inheritance and Survival	Scale and Position	Sound
Entry Icon and Interactive Exhibits	••		••					•••	•	•	•••	•	•	•	•		•			•	
Invention and Innovation: Robots and Prosthetics	•••	•	•••		••	•••	•	•••	•••	•••	•••			•••	•	•	••				
Leonardo-in-Residence					•••				•••		•••	•	•	•			•••	•			
Leonardo's Workshop	•••	•	•		•••	•••	•	•••	•••	•••	•••	•	•	•••	•		•		•	•	•
Display Area			•				•••	•	•		•	•	•	•			•			•	
Café/Learning Lounge	•		•			•	•••	•••	•	•	•						•		••		
Art/Science Installation	•••		•					•••	•		•••	•	•	•	•		•			•	•
Center for the Big Picture	•••	•••	•••	•••	•••	•••	•••	•	•••	•••	•••	•••	•••		•••	•••	•••	•••	•••	•••	
Global Perspectives	•		•					•••	•••		•	•	•			•	•	•	••	•	
Demo Space	•••		•		•	••	•	•	••	••	•••	•	•	••	•		•		•	•	•
Temporary Gallery: Human Rights Special Exhibit	•		•••					•••	•		••	••	••			••			•••		
Multi-Modal Classroom	•••	•	•		•	•••	•	•	•	••	•••	•	•	•••	•		•		•	•	•
Sound and Music (include names of components from Group 9 in the floor plan)	••	•	•••	•••	••				•••	•••	•••			•••	•••						•••
Sound Interactive	••		•					•••	•••		•••			•	•		•				•••
Leonardo's Invention Lab: Flight	•••	•	•		••	•		•••	•••	•••	•••			••	•••		•			••	

Utah Art Core Curriculum grades 3-6

Utah State Office of Education Core Curriculum 3-6	demonstrates joy in self-expression	aesthetic awareness	connection with community heritage and diverse cultures	active involvement with art forms	whole-body experience/learning through movement	multi-sensory experience	problem solving through a sequence: choreography	Basic properties of music: rhythm, melody, texture, harmoy, form, timbre and expressiveness	creating music, improvising, evaluating and refining	understand howmusic relates to science, art, theater, dance, math, health, humanities, media and culture	interact with peers and arrange environments	use theater to express understanding of world, and of other cultures	nonperformative elements: directing, designing, reseraching, comparing, analyzing, and critiquing	make art using a variety of tools and materials	apply principles from significant works of art to one's own art making	understand how content and aethetics express ideas and meaning	contextualize artwork within culture of artist, and other areas of learning
Entry Icon and Interactive Exhibits		•••	•••	•••	•	•		•		•	•				•••	•••	•••
Invention and Innovation: Robots and Prosthetics		•••	•••	•••	••	••	••								•••	•	•••
Leonardo-in-Residence			•••	•••			•	•	••	•••		•••	•••	•	•••	•••	•••
Leonardo's Workshop		•••	•••	•••	••	••	•••	•	•	•••	•	•	•	•	•••	•••	•••
Display Area		•••	•••	•••						••	•				•••	•••	•••
Café/Learning Lounge			•				•	•	•	••				•	•		•
Art/Science Installation		•••	•••	•••	•	•		•	•	•••	•				•••	•••	
Center for the Big Picture		••	•••	••			•••				•			••	••		•••
Global Perspectives			•••														•
Demo Space				•			•••	•	•	•••	•				•		•
Temporary Gallery: Human Rights Special Exhibit		••	•••	•••											•••	•••	•••
Multi-Modal Classroom		•	••	••			•••	•	•	•••	•			••	••		•
Sound and Music (include names of components from Group 9 in the floor plan)		•••		•••	•••	•••	••	•••	•••	••				••	••	••	••
Sound Interactive		•••	•••	•••	•••	•		•••	•••	••					•••	•••	•••
Leonardo's Invention Lab: Flight			•••		•••	•	••										

CURRICULUM CHARTS

Utah Science Core Curriculum grades 7-8

Utah State Office of Education Core Curriculum 7-8	Identify Patterns in Objects and Events	Sort and Sequence Data	Ask Questions, Propose Hypotheses	Plan experiments, collect data and summarize it	Consider alternative points of view	Cite Examples of how Science affects life	Understand connections between various disciplines of science	Understand that science is a process and never final	Understand that Science is used by people in many disciplines	Parts and the Whole	Genetics and Inheritance	Science Writing	Careers in Science	Processes of Change that shape the Earth	Food Web, Food Chain	Impact of Human Life on Earth's Environment	Simple Machines	Universe and Solar System
Entry Icon and Interactive Exhibits	•		••		•••	••	•••	••	•••	•			•	•	•	•	•	
Invention and Innovation: Robots and Prosthetics	•		•••	••	•••	•••	•••	•••	•••	•••			•••				•••	
Leonardo-in-Residence		•••	•••	•••		•••	•••	•••	•••			••	•••	•	•	••	•	
Leonardo's Workshop	•	••	•••	•••	•••	••	•••	•••	•	••	•	••		•	•	•	•••	
Display Area					•		•••	•						•	•		•	
Café/Learning Lounge		••			•••	•	•••	••	•		••	•••	•					
Art/Science Installation	•		••		•••	••	•••	••	•••	•			•	•	•	•	•	
Center for the Big Picture	•••	•••	•••	•••	•	•••	•••	•••	•••	•••	•••		••	•••	•••	•••		•
Global Perspectives	••		•••		•••	•••	•••	•	••	••	••			••	•	•••		
Demo Space			•••	•	•	••	•••	•	••		•				•		••	
Temporary Gallery: Human Rights Special Exhibit	••	•	••		•••	•••	•••	•	•	••	•••			•	••	•••		
Multi-Modal Classroom		•	•••	•	•	•	•	•	••		•	••			•	•	•••	
Sound and Music (include names of components from Group 9 in the floor plan)	•••	••	•••	••		•••	•••	••	•••	••							•••	
Sound Interactive	•		••		•••	•••	•••	••	•••				•				•	
Leonardo's Invention Lab: Flight	•••	•••	•••	••	•••	•••	•••	•••	•••	••			•••	•		••	••	

Utah Art Core Curriculum grades 7-12

Utah State Office of Education Core Curriculum 7-12	demonstrate knowledge of the body and movement	demonstrate knowledge and skills in the elements of dance	understand choreographic principles, processes, and structures	understand dance as a means to create and communicate meaning	use body, voice, and instruments as means of musical expression	improvise and compose music	listening skills	music vocabulary	connect music to joy of living	connect music to traditions, culture and history	find avenues of understanding and communication through music	script dramatic presentations	use basic elements of design to stage a production	develop critical thinking skills	assemble and create visual art	manipuate art media and organize images	find meaning by analyzing, criticising and evaluating visual art	connect visual art with other educational subjects	consider the impact of visual art on life
Entry Icon and Interactive Exhibits	•												•	••			•••	•••	•••
Invention and Innovation: Robots and Prosthetics	•••	•												•••				•••	•••
Leonardo-in-Residence		•	•	•		•		•	•		•••	•••	••					•••	•••
Leonardo's Workshop	•				••	••	•	•	•	•	••	••	•	•••	•••	•••	•••	•••	•••
Display Area														•			•••	••	•••
Café/Learning Lounge						•	•	•	•	•	••	•••		••			•	••	•••
Art/Science Installation	•	•			•	•	•						•	•••			•••	•••	•••
Center for the Big Picture														•••	•	•	•••	•••	•••
Global Perspectives														•••				•••	•••
Demo Space	•	•			•	•		•	•	•	•		•	•••	•••	•••	•	••	•••
Temporary Gallery: Human Rights Special Exhibit														••			•••	•••	•••
Multi-Modal Classroom	•	•			•	•		•	•	•	•	••	•	•••	•••	•••	•••	•••	•••
Sound and Music (include names of components from Group 9 in the floor plan)	••				•••	•••	•••	•••	•••	•	•••			•••			•••	•••	•••
Sound Interactive	••				••	••	•••	••	•••	•••	•••			•••			•••	••	•••
Leonardo's Invention Lab: Flight	•													•••				•	•••

CURRICULUM CHARTS

Utah Science Core Curriculum grades 9-12

Utah State Office of Education Core Curriculum 9-12	Observe and record objects, events and patterns	Use comparisons to help understand observations and phenomena	Evaluate, sort, and sequence data	Plan and conduct experiments	Identify problems or questions	Formulate hypotheses	Use prior data to predict results	Use graphs, charts and diagrams to summarize data	Report on investigations and findings	Develop and use classification systems	Construct models and simulations to describe natural phenomena	Voluntarily read and study science materials	Accept responsibility for resolving social, ethical and ecological problems	Distinguish between science and other intellectual frameworks	Apply principles and concepts of science to explain phenomena	Cite examples of how science effects human life	Understand the cummulative nature of scientific knowledge	Recognize individuals' contributions to science	Understand that science is used by many people, not just scientists	Understand that science is a process and a conversation	understand that scientific disciplines share common rules of evidence
Entry Icon and Interactive Exhibits	***	*			*	*	*					*		**	*	*		*	***	**	
Invention and Innovation: Robots and Prosthetics	*	**	**	***	***	***	***		*	*	***	***	**			***	***	***	***	***	
Leonardo-in-Residence									***		***	***	***	***		***	***	***	***	***	***
Leonardo's Workshop	***	***	***	***	***	***	***	***	*	*	***	***	*			*			***	*	*
Display Area	*				*	*	*					*		**	*	*		*	***	**	
Café/Learning Lounge									***			***		**	*	***	*	**	**	***	*
Art/Science Installation	***	*			*	*	*					*		**	*	*		*	***	**	
Center for the Big Picture	***	***	***	***	***	***	***	***		**	***	***	**		**	***	***		*	*	***
Global Perspectives	***	*			*	*	*					*			*	*		*	***	**	
Demo Space	***	***	***	***	***	***	***	***	*	*	***	***	*			*			***	*	*
Temporary Gallery: Human Rights Special Exhibit	***	***	**			***		*		*		**	**	**	**	***		*	***	***	
Multi-Modal Classroom	***	***	***	***	***	***	***	***	*	*	***	***	*			*		*	***	**	*
Sound and Music (include names of components from Group 9 in the floor plan)	***	***	***	***	***	***	***		*			***		**	**	***			***	*	
Sound Interactive	***	*			*	*	*					*		**	*	*		*	***	**	
Leonardo's Invention Lab: Flight	*	*						*				***			***	***	***	**	***		

EXHIBIT BUDGET

Patrick Dougherty sculpture

In consultation with Director Peter Giles and Associate Director Alexandra Hesse, Gyroscope has developed an exhibition budget for The Leonardo's program. By industry standards, the budget is far below what other science centers typically allocate for new exhibits. In recent years, interactive exhibit fabrication costs have run between $500-$1000 per square foot (PSF) and for exhibitions with less complexity the average is about $350 PSF.

How can this program be achieved for $2.5 million? All of the following assumptions and strategies must be utilized collectively in order to meet this aggressive target.

First, the leased exhibits from the Exploratorium represent a significant savings for The Leonardo. If each of those 40 interactive exhibits was to be prototyped and fabricated from the ground up, the average cost would be $20,000-$50,000 per component. That total alone would represent $1.4 million without any additional costs such as design and coordination, graphics, shipping and installation.

Secondly, the 4,000 SF temporary exhibition space on the second level is not included in this fabrication budget. Separate, restricted funding has been secured for that project.

Thirdly, this program relies on loaned objects from local corporations such as Otto Bock and Sarcos. This will require a committed and resourceful staff to coordinate loan agreements, packing and handling, mount making if necessary and installation by experienced technicians. The Leonardo has already demonstrated tremendous resourcefulness in bringing the major blockbuster exhibit *BODY WORLDS 3* to Salt Lake City and installing this major show in a very short time frame with extremely limited staff resources.

The fourth strategy to meet these budget projections is the use of large-scale science, technology and art installations by local and national talent. The dollar amounts for these pieces are based on actual submittals The Leonardo received during the recent Call for Entries for the *BODY WORLDS 3* installation as well as phone calls to individual artists such as Patrick Dougherty to discuss the project.

The fifth strategy is to take advantage of the trend in science centers and museums in general of user generated contributions. Our previous planning and design documents provided for three major workshops where visitors could drop in, make something and then put it on display nearby. This current program still includes workshops, but the total number has been reduced to Leonardo's Workshop on the first floor, with smaller worktable activities and demonstration counters embedded in each of the major zones. Most of the furniture will be purchased "off-the-shelf" from commercial and industrial suppliers. Custom units will use green materials where appropriate.

Although much lower in capital costs, operating costs for these facilitated spaces are higher, however Gyroscope has recommended several approaches to address this:

- Graduate students pursuing teaching credentials and education degrees.
- Grant funded positions. Many of the larger science centers are currently using this approach.
- Personnel on loan from large corporations. On previous projects, we have seen this work very successfully.

Sixth, the assumption in this budget is that the building will provide necessary power, data, lighting, and all infrastructure to distribute systems and utilities to the point of connections at each exhibit. Alternatively, a lump sum of approximately $900,000 would need to be added to the exhibition budget to cover those costs. It is also assumed that fabrication costs remain stable over the next two years and the building is ready for installation and move-in condition. Delays will increase monthly carrying costs for The Leonardo and potentially require additional expenses such as hiring additional labor for load-in and installation, storage fees, rush charges, and cleaning.

This budget also assumes that The Leonardo staff will provide all exhibit graphics including writing, design, production and mounting. Only large-scale wall graphics are included in this budget.

Additionally, the budget does not allow for any lighting design, track or fixtures, controls or other special effects, rough or final hanging. The Leonardo staff will handle these tasks.

The Leonardo will also be responsible for all coordination tasks related to loan agreements, call for entries, artist installations and facilitated programming. The Leonardo has proven their capacity in these tasks by the rich programming put in place for *BODY WORLDS 3*.

If all of these strategies and assumptions are adhered to and costs and schedules are stable, The Leonardo should be able to meet these 2008 budget projections.

EXHIBIT BUDGET

Zones and Components	SF/Size	Unit		Unit Cost 2008 Dollars	2008 Dollars	TOTAL	Notes
Interior Wall Partitions				$0	$0		NIC: See Bldg. Budget
Lighting Systems				$0	$0		NIC: See Bldg. Budget
Lighting Control, Dimmers				$0	$0		NIC: See Bldg. Budget
Lighting Track & Fixtures				$0	$0		NIC: See Bldg. Budget
Building signage & wayfinding				$0	$0		NIC: See Bldg. Budget
Exhibit Graphics, Labels				$0	$0		NIC: In-house by staff
SUBTOTAL						$0	
FIRST FLOOR							
Arrival Zone							NIC
Ticketing System & Entry Info				$0	$0		NIC
Signage				$0	$0		NIC
Front Desk				$0	$0		Re-use from Leo Zone Body Worlds
Visitor Contribution Wall				$0	$0		NIC
Retail				$0	$0		NIC
SUBTOTAL						**$0**	
Exhibits in Entry							
Entry Icon				$20,000	$20,000		Allowance Entry Icon
ALAV's				$5,000	$5,000		Allowance for ALAV's Blubberbots w/ Leo Logo
ExNET exhibits				$0	$0		Leased EXNET exhibits: cost carried on second floor
SUBTOTAL						**$25,000**	
Invention & Innovation	4,000						Robotics/Prothetics; Needs Prototyping
Otto Bock collection							Loan agreements by staff
Sarcos Artifacts							Loan agreements by staff
Shelves for Casts	48" x 24" x 144"' high	36		$200	$7,200		Boltless Steel Shelving; 500 lb capacity;5 Shelves per unit
Bicylce Legs		1		$20,000	$20,000		Purchase: Exploratorium
Tables	72"x36"x 30h	5		$1,200	$6,000		Purchase: Room &Board
Computer workstations		4		$3,500	$14,000		Allowance for hardware
Computer software			LS		$30,000		Allowance for software
Build Your Own Robots			LS		$50,000		Allowance for Servo Kits, mazes, challenges
42" flat screen display		1		$5,000	$5,000		
Demonstration Counter		1	LS	$3,000	$3,000		
Lounge Furniture				$0	$0		Re-Use from Body Worlds
Misc. Stools/Chairs		32		$100	$3,200		Industrial grade; adjustable height
Misc. Supplies/props/kits			LS		$10,000		Allowance for Supplies
Misc. Display Cases			LS		$50,000		Allowance for Loaned Artifacts
Large Scale Leonardo Graphics			LS		$10,000		Allowance
SUBTOTAL						**$208,400**	
Atrium Space							
Science/Art Installation					$40,000		12 Month Science/Art Installation:Margaret Pingree
ExNET exhibits				$0	$0		Leased EXNET exhibits: cost carried on second floor
Large Scale Exhibit Graphics			LS		$10,000		Icon and Atrium large scale graphics
SUBTOTAL						**$50,000**	
Leonardo's Workshop-Drop in Space	1,800						
Tables	72"x36"x 30h	7		$1,200	$8,400		Purchase: Room & Board
Counter Top	96 7/8 " x 25 5/8 " x1 1/8 "	4		$300	$1,200		Ikea
Rolling Carts	48x24x36"H	4		$1,000	$4,000		Mobile Drawer Worktable Model B430; includes hardwood top
Computer workstations		4		$3,500	$14,000		Allowance for hardware
Computer software			LS		$30,000		Allowance for software
Equipment			LS		$20,000		Allowance for equipment: (rock tumbler, kiln, etc.)
Tools			LS		$15,000		Allowance for Tools
Sink		1	LS	$2,000	$2,000		Stainless steel sink, ADA faucet & lever set. Hook up to supply and drains by others
Pegboard / Pog wall		1	LS	$10,000	$10,000		Allowance
Storage Cabs/Flat Files		10		$800	$8,000		Counter Height
Storage Cabs		2		$1,500	$3,000		Fulll Height
Misc. Supplies			LS		$10,000		Allowance for Supplies
Display shelves for user-made projects	48" x 18" x 144"' high	8		$250	$2,000		Boltless Steel Shelving; 500 lb capacity;5 Shelves per unit
Misc. Stools/Charis		32		$100	$3,200		Industrial grade; adjustable height
42" flat screen display		1		$5,000	$5,000		
Large Scale Leonardo Graphics			LS		$20,000		Allowance
SUBTOTAL						**$155,800**	

Kersten Swinyard

Body Worlds 3 at The Leonardo 2008

EXHIBIT BUDGET

Zones and Components	SF/Size	Unit		Unit Cost 2008 Dollars	2008 Dollars	TOTAL	Notes
Leonardo's Classroom/Studio Space	1,700						
Sink		1	LS	$2,000	$2,000		Stainless steel sink, ADA faucet & lever set. Hook up to supply and drains by others
Counter Top	96 7/8 " x 25 5/8 " x1 1/8 "	4		$300	$1,200		Ikea
Storage Cabs/Flat Files		3		$800	$2,400		Counter Height
Pegboard / Pog wall		1	LS	$5,000	$5,000		Allowance
Tables	72"x36"x 30h	4		$1,200	$4,800		Purchase: Room &Board
Adjustable Shelving		24	LF	$100	$2,400		Local hardware supply
Misc. Equip. & Supplies			LS		$10,000		Allowance
Computer workstations		4		$3,500	$14,000		Allowance for hardware
Computer software		1	LS	$20,000	$20,000		Allowance for software
Misc. Stools/Chairs		32		$100	$3,200		Industrial grade; adjustable height
SUBTOTAL						**$65,000**	
Leonardo in Residence	500						
Storage Cabs/Flat Files		2		$800	$1,600		Counter Height
Tables	72"x36"x 30h	1		$1,200	$1,200		Purchase: Room & Board
Computer workstations		1		$3,500	$3,500		Allowance for hardware
Computer software		1	LS	$20,000	$20,000		Allowance for software
Misc. Stools/Chairs		3		$100	$300		Industrial grade; adjustable height
Misc. Supplies					$5,000		Allowance
SUBTOTAL						**$31,600**	
Leonardo's Gallery							
Rolling/Folding Wall Units	48"x120"H	10		$2,000	$20,000		Hinged Homosote Panels on Steel Frame with clips; base
SUBTOTAL						**$20,000**	
Learning Lounge							
Lounge Furniture		2		$3,000	$6,000		Purchase: Ikea
Misc. Tables		2		$500	$1,000		Purchase: Ikea, Room & Board
Grafitti Wall			LS		$5,000		
SUBTOTAL						**$12,000**	
SECOND FLOOR							
Temporary Exhibitions Gallery	5,500					$0	NIC:Separate Budget
Resource Area	500					$0	NIC
Demo Space	1,200					$0	NIC
Multi Modal Classroom							
42" flat screen display		1		$5,000	$5,000		
Tables	72"x36"x 30h	4		$1,200	$4,800		Purchase: Room & Board
Misc. Stools/Chairs		32		$100	$3,200		Industrial grade; adjustable height
Shelving					$0		Use Existing
SUBTOTAL						**$13,000**	
Center for Big Picture	4,000						
Sphere of Humanity							
5' 8" Globe System, Science on a Sphere, National Oceanic & Atmospheric Association		1	LS	$300,000	$300,000		Based on installed cost at other museums. Includes custom software.
Railing			LS		$20,000		
Flat panel display		2	LS	$7,400	$14,800		Panasonic TH-65PF9UK 65" Professional Plasma Display
Projector Housing & Rack Mounts		4		$10,000	$40,000		
16" Globe System, Magic Planet, Global Imagination		1		$22,200	$22,200		Includes 1 new Magic Planet 16" spheres, portable base; XGA projector; 1 year hardware and software runtime; 1 day on-site product installation and training; shipping travel cases; software content and development tools per developer seat; 1 year software support, maintenance, and update; desktop computer, 3000 Series Elo Entuitive 1725 17" LCD Touchmonitor w/ Intellitouch technology and USB interface
16" Globe System, Magic Planet, Global Imagination		1			$0		Provided by Owner
Cabinet & Housing for Magic Planets		2	LS	$10,000	$20,000		Green Materials: Sunflower Seed Board
Other equipment					$5,000		Allowance
Natural World installation: Patrick Dougherty		1		$120,000	$120,000		Allowance: based on phone call w/ PD & other museum installations
Genetic Migrations Demonstration Station							
Counter Top	96 7/8 " x 25 5/8 " x1 1/8 "	1		$300	$300		Ikea
Base Unit		1	LS	$10,000	$10,000		Green Materials: plyboo or sunflower base cabinet
Computer workstations w/flat screens		1		$3,500	$3,500		Allowance for hardware
Computer software		1	LS	$30,000	$30,000		Allowance for software
Misc. Supplies			LS		$15,000		Allowance
Microscopes		2		$2,000	$4,000		Flex videoscopes by Ken-A-Vision
Large Scale Leonardo Graphics			LS		$10,000		Allowance
SUBTOTAL						**$614,800**	

Kersten Swinyard

Leo Zone at The Leonardo, Body World 3

EXHIBIT BUDGET

Zones and Components	SF/Size	Unit		Unit Cost 2008 Dollars	2008 Dollars	TOTAL	Notes
Global Perspectives							Genetic Morphing Animation Wall; Needs Prototyping
Flat panel display		1	LS	$7,400	$7,400		Panasonic TH-65PF9UK 65" Professional Plasma Display
Computer workstations		1	LS	$3,500	$3,500		Allowance for hardware, camera
Computer software		1	LS	$40,000	$40,000		Allowance for software
Kiosk Unit		1	LS	$10,000	$10,000		Green Materials: plyboo or sunflower base cabinet
Glacier Photo Exhibits		1	LS	$5,000	$5,000		per AH
Exhibit Graphics/Labels			LS		$10,000		Allowance
SUBTOTAL						**$75,900**	
Sound & Music	1,800						
ExNET Sound Exhibits			LS		$175,000		ExNET exhibits spread throughout F1 & F2:
Tables	72"x36"x 30h	2		$1,200	$2,400		Purchase: Room & Board
Computer workstations		2		$3,500	$7,000		Allowance for hardware
Computer software					$15,000		Allowance for software
Recycled Supplies					$0		Donations: Make Your own Instrument
Stools		16		$100	$1,600		Industrial grade; adjustable height
Misc. Tools & Supplies			LS		$10,000		Allowance for Supplies
Sound Room					$0		
Recording booth equipment					$0		Re-use existing from Body Worlds
ListeningLounge							
Leo Wall w/ Sound Dome		1	LS		$0		Re-Use existing from Body Worlds
Lounge seating		1		$3,000	$3,000		Purchase: Room & Board Commercial grade
Booth seating		8		$500	$4,000		
Chairs		6		$200	$1,200		
Misc. tables		3		$500	$1,500		Purchase: Room & Board Commercial grade
Sound Interactive		1	LS	$20,000	$20,000		University of Utah: Mike Cottle installation
Large Scale Leonardo Graphics		1	LS		$10,000		Allowance
SUBTOTAL						**$250,700**	
Flight							
Flight Simulator					$0		Donation: Rockwell
Interactive Exhibits					$0		ExNET exhibits cost counted above
Glass Storefront enclosure					$0		NIC: See Bldg. Budget
Classroom furniture					$0		Owner's FF & E
Signage					$0		NIC: See Bldg Signage
Display Shleving					$0		Use Existing
SUBTOTAL						**$0**	
TOTAL EXHIBIT FABRICATION COST						**$1,522,200**	
Prototyping & Remediation 10%					$152,220		Otto Bock, Sarcos, De-Bug
Shipping 2.5%					$38,055		
Installation 12%					$182,664		Fabricators/non-staff
Contingency 20%					$304,440		
Sales Tax 6.6%					$100,465		TBD if Leonardo has to pay
Subtotal					$777,844		
TOTAL FAB						**$2,300,044**	

Kersten Swinyard

Leo Zone at The Leonardo, Body World 3

OPERATING PROFILE

Gyroscope has examined likely attendance at The Leonardo in light of the new plan described in this report. Our recommendations follow.

Previous Attendance Estimates

In August 2007, business consultant Dennis Evans prepared a business plan for The Leonardo that included the following estimates of attendance for a stabilized year of operations based on actual results at other museums locally and nationally.

Leonardo attendance estimate, 2007	Stable Year
Expected attendance	213,000
Conservative attendance	160,000

In November, 2007, Economic Research Associates reviewed Mr. Evans' report on behalf of the Salt Lake City Council. Based on their own analysis of market penetration and operating results at similar institutions, ERA concluded that, "The attendance projection and overall stabilized (third year) operational budget described in The Leonardo business plan are within a reasonable range and in general adhere to industry ratios and benchmarks."

The Need for a Revised Estimate

Since November, 2007, the concept for The Leonardo has changed in ways that could have an impact on attendance. In particular:

- The character of the program has shifted from a multidisciplinary museum to an interactive science center, and accordingly the program includes a higher percentage of interactive science exhibits than previously.

- The project will be supplemented over years as funds permit. Exhibits will occupy the same footprint as the plan upon which Mr. Evans based his estimate, but the program is budgeted at a lower level, and exhibits will be spread out as a result.

National Benchmark Museums

Based on these changes, Gyroscope has identified a set of benchmark institutions similar in size and style to the revised concept for The Leonardo.
The museums we have selected meet the following criteria:

- All are interactive science centers.
- All have between 20,000 and 30,000 square feet of indoor exhibits.
- None have IMAX or other large format theaters, since these features are known to inflate attendance.

We examined data from the Association of Science-Technology Centers (ASTC) for 2007, the most recent year available, and found seven institutions that meet these criteria. They are:

- Adventure Science Center, Nashville, TN
- Discovery Science Center, Santa Ana, CA
- Explora, Albuquerque, NM
- Impression 5, Lansing, MI
- Lawrence Hall of Science, Berkeley, CA
- Museum of Discovery, Little Rock, AR
- Sci-Works, Winston-Salem, NC

Key statistics for these institutions are summarized here.

Institution	Population (MSA)	Adult Admission	Building Square Feet	Exhibits Square Feet	2007 Attendance
The Leonardo	1,099,973		100,000	24,000	
Adventure Science Center	1,521,437	$9.00	77,052	21,541	251,682
Discovery Science Center[1]	2,997,033	$12.95	59,000	26,000	420,336
Explora	835,120	$7.00	50,000	20,000	187,566
Impression 5	456,440	$5.00	56,000	26,000	75,598
Lawrence Hall of Science	2,483,442	$10.00	77,000	30,000	222,592
Museum of Discovery	666,401	$8.00	44,000	25,000	91,790
Sci-Works	463,159	$10.00	70,700	30,000	100,291
Mean	1,296,630	$8.85	61,695	25,506	192,836
Adjusted Mean					171,082
Median					187,566

[1]Discovery Science Center added a new 10,000 sf outdoor exhibit in 2007 and their attendance has increased dramatically as a result. Attendance for 2006 was 268,054, which would reduce the average in the table to 171,082.

OPERATING PROFILE





These museums have an average attendance of 171,000, but the range is enormous, from a high of 420,336 to a low of 75,598. Given that wide range, where might we expect The Leonardo to fall?

Factors Influencing Attendance at The Leonardo

- **Size**. The Leonardo falls close to average in square feet of exhibits, which is one factor known to influence attendance.
- **Regional population is another.** The Salt Lake regional population is near the mid-point for the benchmark institutions, and significantly higher than the three least-visited museums.
- **Demographics.** According to a study conducted for TRAX, Salt Lake County residents are 20% more likely to visit museums than the national average,[2] a favorable factor for The Leonardo.
- **Type of program.** The Leonardo's program will include a mix of interactive exhibits, workshop spaces, and art installations. The interactive exhibits will be leased from the Exploratorium, a leading science center whose exhibits are typical for the industry and have a proven track record for attracting audiences. The Leonardo's workshop spaces are similar to those at Explora, whose attendance is very close to the average for the benchmark institutions listed above. For purposes of projecting attendance, Gyroscope believes that it is reasonable to assume that The Leonardo's program will have average or better audience appeal.
- **Location.** The Leonardo's location at Library Square is highly visible and easily accessible by car or public transit. The new Library across the plaza attracts 3 million visitors per year to the site. Gyroscope considers this location to be above average for comparable science centers, and a positive factor for attendance.
- **Price does not appear to be a factor:** On the contrary, the most-visited museums in this list actually have higher than average admission fees.
- **Quality and Volume.** While the quality of exhibits at The Leonardo will be at or above industry standards, the volume of exhibits will initially be lower than average. The lower density of exhibits is a negative factor for attendance.
- **Traveling exhibitions.** Large traveling exhibitions can have a dramatic impact on attendance. The chart below shows increased attendance at eleven museums ranging from 27% to 234% above the same period the previous year as a result of major touring exhibitions. Average increase is 90%. (Since traveling exhibits typically stay at one site for four to six months, the annual impact of such an exhibit is lower, averaging 30% to 45%.) The Leonardo is already offering major traveling exhibitions such as *BODY WORLDS 3* and *Exodus*, and will continue to do so once the new facility opens. This strategy should result in increased attendance levels in years that such exhibitions are on display. *BODY WORLDS 3* attracted 100,000 visitors in the first six weeks, or 140,000 in the first 8 weeks. *BODY WORLDS 3* is expected to draw approximately 300,000 in total.

"Typical" Traveling Exhibitions[3]

Exhibit	Museum	Exhibit's average daily attendance	% daily increase above prior year
1	A	1,050	126%
1	B	1,761	75%
1	C	822	105%
1	D	1,747	74%
2	E	1,173	34%
2	F	514	101%
3	G	487	58%
3	H	750	27%
3	I	687	124%
3	J	355	234%
3	K	1,034	37%

Taken together, the factors described above suggest that The Leonardo should attract an audience at or above the average for the benchmark institutions.

[2]Source: TRAX Collaborative Marketing Study, AMS, April 2008

[3]Adapted from What is A Successful Traveling Exhibition?, Dr. Robert Mac West, Informal Learning Experiences, Washington, DC

OPERATING PROFILE

Local Benchmarks

In addition to national benchmarks, Gyroscope also reviewed attendance at three local cultural organizations. They are:

- Clark Planetarium
- Discovery Gateway
- Utah Museum of Natural History

Their 2007 attendance, as reported by the American Association of Museums, is shown here.

Institution	Building Square Feet	Exhibits Square Feet	2007 Attendance
The Leonardo	100,000	24,000	
Clark Planetarium		15,000	350,000
Discovery Gateway	74,000	36,000	305,000
Utah Museum of Natural History		23,000	74,000
Mean		25,000	243,000

Clark Planetarium operates a facility that includes 15,000 square feet of free exhibits, an IMAX theater, and of course the planetarium theater itself. Clark Planetarium averaged around 350,000 visitors per year from 2003 to 2007. These results indicate a high degree of public interest in science-related attractions, but are not directly applicable to The Leonardo due to major differences in programming and operating profile between the two organizations.

Discovery Gateway, formerly the Utah Children's Museum, opened at Gateway in September 2006. They estimated 305,000 visitors for 2007, their first full year of operation. Discovery Gateway operates a 74,000 sf facility with 36,000 sf of exhibits, which is somewhat larger exhibit space than the plan for The Leonardo. Like The Leonardo, Discovery Gateway is an interactive museum, although with an emphasis on a very young audience.

The Utah Museum of Natural History, on the campus of the University of Utah, had an attendance of 74,000 for 2007. Their facility is not easily accessible, with difficult parking and dated exhibits, and their attendance is artificially low as a result. The Museum broke ground for a major new facility in the summer of 2008 and is estimating that attendance should increase significantly to 210,000 when their new building opens.

Estimated stable year attendance at The Leonardo

Based on the assessment above, Gyroscope estimates that The Leonardo can reasonably anticipate an attendance of 170,000 visitors per year in a stable operating year, with a conservative estimate of 125,000. The estimate of 170,000 matches the average for the benchmark science centers, a reasonable and possibly conservative assumption given The Leonardo's advantages outlined above.

Leonardo expected attendance estimate	Stable Year
Expected attendance	170,000
Conservative attendance	125,000

The estimate is 50% lower than attendance at Clark Planetarium, but the Clark enjoys the advantages of a free exhibits program and popular IMAX theater. The estimate is also lower than Discovery Gateway, reflecting differences in the size of the two programs as well as the fact that Discovery Gateway's numbers for 2007 are inflated because they had just opened. Finally, the estimate is higher than current attendance at the Museum of Natural History, but lower than their projected attendance following expansion.

Estimated first-year attendance

Gyroscope's estimate of 170,000 visits is for a stable operating year following full build out of the program. Actual attendance during the early years of operation is likely to vary from this level for several reasons:

- Initially, we anticipate baseline attendance will be lower, closer to the conservative estimate of 125,000, because of lower density of exhibits and programs.

- Offsetting this factor, first year attendance will be higher because new museums get a bounce from the excitement and anticipation at launch. First-year attendance is typically 60% higher than for subsequent stable years. Assuming a stable year of 125,000, first-year attendance would then be 200,000.

OPERATING PROFILE

Year two attendance

- The Leonardo plans to offset the normal drop in attendance that new museums experience in year two by offering a major traveling exhibit on Leonardo da Vinci. The impact of traveling exhibits varies widely depending on the topic and popularity of the particular show, as noted above. A few major exhibits, such as *BODY WORLDS 3*, can double annual attendance or better, but exhibits of this scale are rare. *BODY WORLDS 3* attracted 100,000 visitors in the first six weeks, or 140,000 in the first 8 weeks. For the purposes of planning, we assume that The Leonardo could generate net attendance of 33% above baseline in years in which it hosts one of these "blockbuster" shows.

- Assuming a 33% increase above baseline, year two attendance would be 165,000.

Summary

Summarizing these factors, we estimate annual attendance as follows:

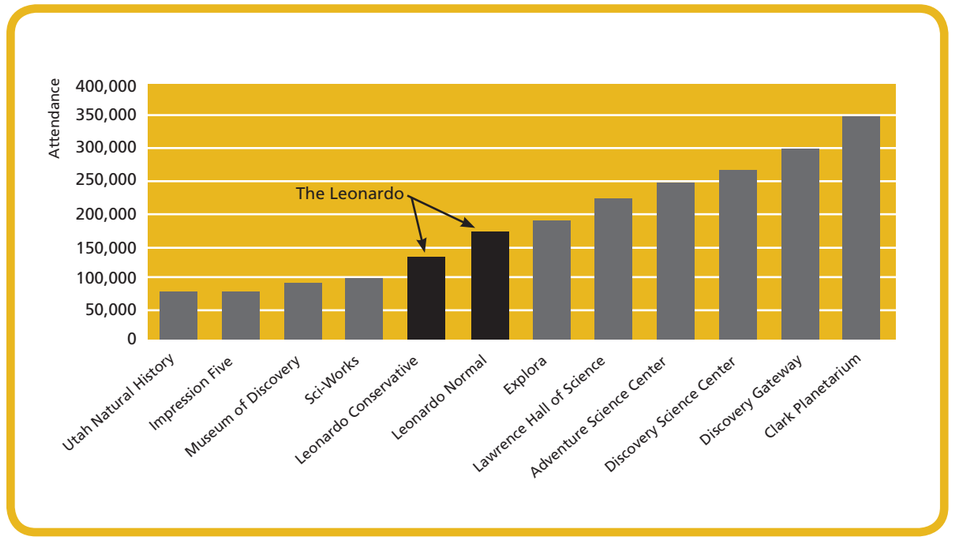
Leonardo attendance estimate	
Year One (Launch)	200,000
Year Two (Special Exhibit Year)	165,000

Attendance in subsequent years is likely to vary depending on completion of new and original exhibits and whether or not The Leonardo hosts a special exhibit.

Baseline Attendance after new exhibits installed	170,000
Special Exhibit Year	225,000

The graph below summarizes the expected and conservative estimates for The Leonardo in comparison to the ten benchmark institutions described above.

Attendance At Similar Museums



BUSINESS PLAN

SECTION PROVIDED BY THE LEONARDO

BUSINESS PLAN – SUMMARY

prepared by Dennis O. Evans

EXECUTIVE SUMMARY

Background

This section has been created to give the reader an understanding of The Leonardo Project as it has been modified by Managements' "New Way Forward" presented to the City in August of 2008. Special emphasis in foregoing sections has been given to new exhibits and programs. The following pages focus on the projected financial needs for Ramp-up, and the results for the first three years of operations post opening.

Mission

The Leonardo is an educational and cultural center fusing science, technology, and the arts in experiences that inspire human creativity and innovation. It celebrates the spirit that guided Renaissance master Leonardo da Vinci and inspires our own exploration of the world. The Leonardo is committed to exploring and connecting science, art, and culture in imaginative ways which can enrich our lives, expand our consciousness, provide high quality learning opportunities, and enhance our community.

Product

Our product is 'The Leonardo Experience', the aggregate of exhibits, programs and service standards, which aim to transform visitors and the way they see the world. For the first three years of operations, The Leonardo product will be built around approximately 40 interactive science exhibits that will be leased from ExNet Exploratorium in San Francisco. These science components will be augmented by art installations and hands-on experiences which accentuate the connections between science and the arts.

Exhibits will take up approximately 24,000 square feet of the three story, 100,000 square foot Building. Another 4,200 square feet on the second level will be utilized as a rotating gallery space. An area on the main level will be called Leonardo's Workshop where classes and drop-in art and science activities will be scheduled. Demonstrations; lectures; performances; symposia; festivals; and film screenings will be hosted on the third level which includes a 188 seat auditorium/film theater, and a 4,000 square foot catering and convention space that will accommodate 250 patrons. The basement and sub-basement will be utilized for storage, shops and student lunchroom facilities.

Approximately every other year beginning in 2011, The Leonardo will host a special exhibit. These special exhibits will certainly not be on par with *Body Worlds 3*, which The Leonardo is hosting from September 19, 2008 to January 11, 2009. They will, however, spur continuing interest in the museum and serve to drive attendance.

Taken as a whole, The Leonardo's product is a "layered learning model," which will provide a variety of interactive and contemplative art and science experiences for first-time or occasional users. Its core of ExNet Exploratorium exhibits have demonstrated their market appeal, thereby reducing market risk.

Market and Audiences

The Leonardo will draw visitors from Salt Lake City and the Wasatch Front, which constitutes a population of over 2 million residents. Secondarily, it will attract patrons from the entire Inter-mountain West, as demonstrated by *Body Worlds*. A portion of adult visitors will come for conventions and special events in the Leonardo's catering /convention center.

Based on market size, square footage dedicated to exhibits, national and local comparables, as well as the market characteristics identified above, we assume a reasonable, normalized attendance of **170,000 per year**. (See also section entitled "Operating Profile," above.)

The importance of our marketing efforts are illustrated by the budget allocation of more than $2 per visitor - substantially higher than industry average - for building The Leonardo brand in the first three years of operation.

Based on our experience with community pilot programs, focus groups conducted by Leichliter LLC, and *Body Worlds*, we have developed programs and exhibits that appeal to audiences of all ages. Our product has been tailored to families and young people of all ages, although we will focus on ages 10 and up. In addition, The Leonardo will emphasize student field trips which will supplement school curricula as well as adult groups who participate in classes and special programs.

Financial Operations

The three components of The Leonardo's financial operations are development revenues, earned revenues and operating expenses.

Development Revenues – On-going fundraising or "development" for operations is a challenge all museums undertake. The American Association of Museum standard puts fundraising at 58% of a museum's operating budget. The Association of Science and Technology Centers puts the average at 45%. The Leonardo's average annual goal is 50.19% or $1.5M per year once the facility is open. The 16 month Ramp-up period will require development funding of approximately $5.0M.

Funds needed to meet annual development goals after opening will come from corporate sponsorships; in-kind donations; local and national foundations; public donations, annual giving and individual contributions, and fund raising events. The development goals for these areas are summarized below:

Earned Revenues – A basic strategy of The Leonardo is to mitigate operating business risk with a diversified business model centered on efficient admission policies, workshop charges, a reasonable contribution from retail sales, and the catering operation. The catering / convention model is of particular importance in this context because it is the only component of the business model which operates almost entirely independent of attendance assumptions.

Operating Expenses – The Leonardo is very much a fixed cost operation. There are few operating expenses tied directly to attendance assumptions. Our objective of having frequent change, variety in programming and special exhibits also drives expenses. Building costs such as utilities, maintenance and security will vary little as a function of admissions numbers. Marketing expenses are not correlated strongly with attendance

INTRODUCTION

In August of 2008, with a change in senior management and in light of the operating experience garnered from preparing for *Body Worlds*, The Leonardo proposed to the City a new plan for actualizing the Project. The primary elements of this so-called "New Way Forward" are:
1. Reduce the Building scope to a budget of $12M to $13M which will be funded with proceeds from the 2003 approved bond issue, $10.2M; a grant from FEMA for seismic upgrades and asbestos abatement for the Building, $1.02M; and approximately $1.5M from the City augmenting the FEMA grant.
2. Open The Leonardo in 2010, 16 months after Body Worlds closes.
3. Reduce the exhibits and programs to approximately 24,000 square feet and utilize exhibits leased from San Francisco's Ex-Net Exploratorium for the first three years of operations, thus reducing the market risk and enhancing market appeal of exhibits and programs. The Leonardo is already in discussion with the Exploratorium, which will also provide professional development services to the museum. Other areas of the building are to be utilized as they have now been renovated for *Body Worlds*.
4. Bring in a special exhibit every other year commencing Year Two.
5. Make a concerted effort to create Leonardo exhibits and programs which will specifically meet the needs of public school curricula and teacher development needs. This aspect of the project is elaborated above, p.33 ff., "Curriculum Charts."

Why The Leonardo?

Perhaps the most critical question in evaluating The Leonardo's revised Business Plan is: "Does there exist a real need for the kind of science, technology and art museum that is envisioned by The Leonardo?"
We believe the answer to this question is a resounding yes. Our position is supported by a number of facts:

1. The Salt Lake City MSA (metropolitan statistical area) can clearly support a dedicated science/technology museum.

Population Growth: both the Salt Lake MSA and Utah populations are projected to grow at approximately twice the national rate. This is a continuation of the 1990-2000 historical trends which saw a 25.9% growth in the Salt Lake MSA as contrasted to a national growth rate of 13.1%.

The Salt Lake City MSA is defined geographically as encompassing the counties of Salt Lake, Summit and Tooele. However, the bulk of the state's population, almost 2,089,522, is concentrated in the "Wasatch Front." This geographic area includes Salt Lake City, extends north through Davis County and Weber counties, includes Ogden, the state's second largest city; and extends south through Utah County, including Provo, the state's third largest city; extends east into Wasatch County to include Park City; and west to Tooele. In addition to a significant population base, most influential business and political leaders reside in the Wasatch Front.

Salt Lake City constitutes only a small portion of the Salt Lake Valley/ County and is the largest city in the state with a population of 174,348. Salt Lake County's population is 913,667, making it the most populous region in Utah.

Below is a listing of science centers in the country and the MSA's that support them. As will be noted, the Wasatch Front, which is the primary market area for The Leonardo, is about 160% of the mean size of MSA's which support science/tech museums.

Institution	Population (MSA)
The Wastach Front (Leonardo)	2,089,522
Adventure Science Center, Nashville TN	1,521,437
Discovery Science Center, Santa Ana CA	2,997,033
Explora, Albuquerque NM	835,120
Impression 5 Lansing MI	456,440
Lawrence Hall of Science, Berkeley CA	2,483,442
Museum of Discovery, Little Rock AK	666,401
Sci-Works, Winston-Salem NC	463,159
Mean	1,296,630

Finally, Salt Lake City serves as the transportation, commercial and cultural center of this entire "Inter-mountain area." Our marketing and promotion efforts will focus in varying degrees on this 4 state area. The market area stretches from Boise, Idaho on the north to Nevada on the south; from Rock Springs, Wyoming on the east to Elko, Nevada on the west. The Leonardo will be a singular, outstanding attraction for this entire area: Potential residential market: 5.1 million (Utah: 2.7mm, Idaho: 1.4mm; Wyoming: 504,000; Nevada area: 500,000).

2. The demographic characteristics of Salt Lake City and its environs would support a science/technology museum.

- As noted above, Utah is one of the fastest growing states in the country due to both the area's high birth rate and to in-migration. Utah's population reached 2.7 million in 2007.
- In a recent Milken Institute study, Utah ranked in the top 10 among states that invest most in science and technology.
- Annual visitors to the Sat Lake City Public Library (adjacent to The Leonardo Building): 3 million.
- The 2006 Utah Museums Survey, conducted by Dan Jones and Associates revealed the following: Local residents comprise 43 percent of museum visitors, tourists 32 percent and school groups 25 percent
- Utah's tourism industry generates $5 billion a year; another source of Leonardo demand.
- Utah has the youngest population in the nation, with a median age of 27.0 in 2007, compared to the national figure of 35.2 years.

The Wasatch Front area is home to:

University of Utah	28,619 students
Brigham Young University	29,577 students
Utah State University	23,000 students
Weber State University	18,000 students
Utah Valley State University	23,750 students
Salt Lake Community College	15,750 students

The University of Utah (U of U) contributes greatly to the state's life sciences industries. Named one of 50 Research Universities by the Carnegie Foundation, the U of U in Salt Lake City is affiliated with several collaborative life science institutions. Among these, the Eccles Institute of Human Genetics is comprised of numerous programs, including the interdisciplinary Program in Human Molecular Biology and Genetics (HMBG), outreach education in the Genetic Science Learning Center, and a tremendous resource for gene modeling, the Utah Genome Depot. Additionally, the Huntsman Cancer Institute (HCI) offers genetic and molecular research, research clinics and clinical trials for patients, and the Utah Population Database (UPDB), which contains nearly 9 million records for use only in biomedical research.

Utah State University (USU), in Logan, also provides resources to the life sciences community. The Technology Commercialization Office at USU provides technology transfer services for technologies developed on its campus by its faculty and staff. The Center for Integrated Biosystems offers advanced equipment, laboratories, and biotechnology training for scientists in industry, academia, and national laboratories.

Several organizations aid the life science industry in Utah. Among these, the Utah Science, Technology, and Research (USTAR) Initiative seeks investments for recruiting prestigious research teams in order to create innovative industries. The Utah Technology Council is a privately funded trade association blending information technology and life sciences, and works as a networking resource for raising capital for businesses.

Utah's life science industry flourishes in the private sector. Among the many companies located in the Beehive State are Cephalon in Salt Lake City; Myriad, also in Salt Lake City; Affiliated Genetics; Cognetix; Advanced Clinical Research (ACR); and Albion Advanced Nutrition in Clearfield.

Utah has a burgeoning biotechnology and life sciences industry, and boasts particular strength in medical devices. The first human artificial heart was developed here.

Utah attracts over $400 million per year in research grants, and there are nearly 15,000 life sciences employees in the state. The largest private sector employer in the state is Intermountain Health Care - which just opened the largest hospital in the Intermountain West (a $387 million project) – 5 miles from The Leonardo.

3. The vision and mission of The Leonardo are widely supported by the community.

Despite the fact that there other existing science-like institutions in the area, e.g., Clark Planetarium, Utah Museum of Natural History, Thanksgiving Point and Discovery Gateway, Salt Lake voters in 2003 demonstrated their desire for The Leonardo by voting, a 63% majority, for a $10.2M bond to fund the development of a science and art museum in the downtown area. Bonding was not approved solely for the renovation of the Building, but for renovations of the Building which would lead to the opening of an institution of the kind envisioned by The Leonardo.

Similarly, extensive market research conducted by Leichliter Associates, LLC of New York City for The Leonardo in 2006 and 2007 confirmed the overall demand for The Leonardo concept in the Utah market. More than 11 strictly controlled focus groups, spanning all relevant community demographics: age, gender, education levels, ethnicity and religion, reaffirmed the broad appeal of the proposed programs and exhibits, and underscored the need for a fused science, technology, art museum in Salt Lake City.

The Leonardo's traveling science program, "Leonardo on Wheels," has been traveling the state for the past five years serving the needs of public school students with science programming.

The Leonardo has also undertaken significant audience research. First, it ran numerous focus groups, conducted by Leichliter Associates and Dan Jones Associates in 2006 and 2007. The results of these have shown overwhelming support of the concept.

The Leonardo also ran two community pilot programs (July 2007 and February 2008) to test the programming mix.

Lastly, The Leonardo's presentation of *Body Worlds 3* has been enthusiastically received by the community. It is expected that total attendance to this special exhibit will attract on the order of 270,000 visitors. The Leonardo is the first and only institution to host *Body Worlds* without a previously existing and fully operating facility of its own.

"The BODY WORLDS exhibitions are fortunate to partner with the world's top science museums. The Leonardo is no exception to this and we are honored to be hosted by such a fine museum with a staff and venue among the finest in the world."
Dr. Angelina Whalley, President, BODY WORLDS

4. The vision and mission of The Leonardo supports Utah as an Innovation Economy

The sections above noted the existence of USTAR (Utah Science Technology and Research) The purposes of the USTAR initiative are to expand Utah's tax base by leveraging the researchers, facilities and teams to generate

- technology-based start-up firms
- higher paying jobs
- business activity

USTAR encourages the production of "new technologies in multi-billion dollar markets" including "bio-fuels, biomedical innovation, diagnostic imaging, nanotech biosensors, and personalized medicine.

The Leonardo and USTAR have already sponsored joint events, including two "Lunch with Leo" events during Body Worlds. This type of collaboration will continue. The professors that USTAR recruits are incredible assets to Utah — their research is exactly the kind that The Leonardo will highlight in rotating exhibits for the public, emphasizing the new technologies and geniuses of Utah. Our regular Leonardo lecture series will include the USTAR professors and their research. Finally, the Leonardo artist-in-residence can be one of the USTAR professors.

As with the state USTAR program, Workforce Innovation in Regional Economic Development (WIRED), a joint project of the U.S. Departments of Labor and Education, was created to drive economic growth by increasing education and expertise on a very high level. WIRED grants support science and technology learning all the way from elementary schools to PhD programs. Students who go through those programs will be 1) more interested in science and technology fields and 2) better able to compete in a global economy where the most lucrative fields just happen to be in those fields. Research and innovation coming from the top doctoral programs in the country drive start-up industries (as we've seen in Utah with the bio-tech companies), create more jobs, increase the tax base of the country/region/state and de facto make the country/region/state a more livable place through better education and higher incomes.

The Leonardo is already participating in WIRED initiatives through Leonardo on Wheels visits to Utah elementary and middle schools. Opening of The Leonardo will simply expand our support of the WIRED objective.

Science, technology, engineering and mathematics (STEM) are the emphases of a national push to improve the country's public education and readiness for a globalized work market. STEM is used as shorthand and jargon for the need to boost performance in those fields — STEM is usually cited in context with funding programs such as USTAR and WIRED. STEM improvements at all grade levels are essential critical to USTAR achieving it potential. The Leonardo will become a vital resource to Utah schools and homes by improving STEM learning and fostering student motivation.

5. Enhancenment of Library Square and Downtown Salt Lake City

The contribution that The Leonardo can make to the vitality of Downtown Salt Lake and Library Square has been well demonstrated by the 4 month run of *Body Worlds.* Not since the Old Main Library closed in 2000 has Library Square enjoyed the kind of foot traffic and general activity it has since The Leonardo was opened for Body Worlds in September. Library Square has been a destination for more than 200,000 visitors to date. This aspect of moving forward with The Leonardo project, i.e., of establishing a science and art museum permanently in the Building should not be underestimated.

Governance

The Leonardo was established as a 501(c)(3), non-profit corporation in 2002 to actualize the City's mandate for re-use of the Old Main Library as a center for science, culture and the arts and as an enhancement to Library Square. The three organizations who joined forces to establish The Leonardo, the Utah Science Center (USC), the Center for Documentary Arts (CDA), and YouthCity Artways (YCA) all maintain Board representation and are among several community and program partners of The Leonardo which, from time to time, may submit proposals for inclusion in programming and exhibits. All maintain their corporate autonomy and own fundraising efforts. However, USC has determined to merge with and become a part of The Leonardo in 2009. CDA signed an affiliation agreement in 2008 which provides that their exhbits and programs may be considered for inclusion in our museum on a pari passu basis with other programming partners. YouthCity Artways will utilize classroom space in the building for its classes.

The Board of Directors – The Articles of Incorporation create a Board of Directors as the principal governing and policy making body of the foundation. The Board is to be comprised of at least three, but no more than fifteen members. At present the Board is comprised of the following 11 members:

Officers
Mr. Marshall Wright- Chairman
Dr. Suzanne Winters – Secretary/Treasurer

Members
Ms. Janet Wolf
Mr. Allen Roberts
Mr. Peter Giles *Executive Director*
Dr. Ned Weinshenker
Ms.. Beth Elder
Ms. Jann Haworth
Mr. Jeff Unruh
Mr. Will West
Mr. Adam Price

Management
Currently, The Leonardo Corporation is comprised of the following team:
Peter Giles, *Executive Director*
Alexandra Hesse, *Associate Executive Director*
Dr. Joseph Andrade, *Executive Director, Utah Science Center (merger between The Leonardo and USC pending)*
Dennis O. Evans, *Business Consultant*
Laura Reid, *Financial Controller*
Lisa Davis, *Communications Consultant*
Kersten Swinyard, *Project Manager*

The Corporation as of November 15, 2009 has three full-time employees. It also engages consultants on an as-needed basis to pursue specific projects.

FINANCIAL OPERATIONS

The following section of the Business Plan details to the extent possible current plans for the financial operations of The Leonardo, during the 16 month Ramp-up period, February, 2009 to July 2010, and operating years one through year three, 2010 – 2013. We have made every effort to forecast accurately the results that could be expected from the operation. It is management's best estimate that a reasonable, normalized attendance assumption is 170,000 per year.

The three components of The Leonardo's financial operations are development revenues, earned revenues and operating expenses. The Statement of Activities for the 16 month Ramp-up period and for the first three years of operations which is shown immediately below, has been constructed so as to put development revenue needs in the final position. This is done to show the Project's ultimate reliance on non-operational resources. Following the Statement of Activities, each of the three financial elements of the operation: earned revenues, operating expenses; and development revenues, is then developed in greater detail in its own section.

	16 Month	Year 1	Year 2	Year 3
Attendance	Ramp-up	200,000	165,000	170,000
Earned Revenue				
Admissions		$1,084,000.00	$1,493,225.00	$921,400.00
Memberships		$75,000.00	$75,000.00	$75,000.00
Retail		$220,000.00	$181,500.00	$187,000.00
Café / Catering		$130,000.00	$123,000.00	$124,000.00
Workshops		$24,960.00	$27,456.00	$30,201.60
Miscellaneous Rental Fees		$30,000.00	$24,750.00	$25,500.00
Sub-total		$1,563,960.00	$1,924,931.00	$1,363,101.60
Operating Expenses				
Salaries & Contract Services	$1,220,444.00	$1,764,325	$1,852,541.25	$1,764,325.00
Building Expenses	$60,000.00	$208,280.00	$218,694.00	$229,628.70
Exhibits		$325,000.00	$1,025,000.00	$275,000.00
Marketing	$450,000.00	$300,000.00	$500,000.00	$300,000.00
G&A	$40,000.00	$55,000.00	$55,000.00	$50,000.00
Retail CofGS		$110,000.00	$90,750.00	$93,500.00
Sub-total	$1,770,444.00	$2,762,605.00	$3,741,985.25	$2,712,453.70
FFE	$700,000.00			
Exhibits	$2,300,044.00			
Contingency Reserve	$250,000.00			
Total Expenses	$5,020,488.00	$2,762,605.00	$3,741,985.25	$2,712,453.70
Net Funding Needed	$5,020,488.00	$1,198,645.00	$1,817,054.25	$1,349,352.10

Earned Revenues

A basic strategic premise of The Leonardo is to mitigate operating business risk to the extent possible. Revisions in the Business Plan have sought to diminish the admissions risk, or market demand risk for The Leonardo product. The most important decision in this regard was to lease approximately 40 inter-active science/technology exhibits from ExNet for the first three operating years. Similarly, we will bring a special exhibit to The Leonardo every other year beginning in year two. Finally, we must limit our business risk with a diversified business model centered on efficient admission policies, workshop charges, a reasonable contribution from retail sales, and revenues from the catering business. The catering model is of particular importance in this context because it is the only component of the business model which operates almost entirely independent of attendance assumptions. Therefore, it provides the best means of mitigating our operating risk.

Admissions Revenues

The basic factors in determining admissions revenues are attendance, pricing, and fare category distribution. Pricing and fare category distribution combine to generate the net yield per ticket or the "per cap" yield.

1. Attendance Assumptions

The financial projections for the operating years One, Two and Three, 2010 – 2013, are based on the primary construct variable which is total attendance. It is Management's best estimate that a reasonable, normalized attendance assumption is 170,000 per year. This level obtains in Year Three. Year One, for most venues, is normally significantly higher than normal year because of the novelty of a new venue. The Projections reflect that assumption, and drawing on Gyroscope's conclusions, place Year One attendance at 200,000. Year Two Projections anticipate a special exhibit to off-set the typical second year decline in science museum attendance. Year Two calls for attendance of 165,000, approximately 130% of a conservative year attendance of 125,000

2. Pricing Assumptions

Our pricing matrix is as follows:

Ticket Categories	
Adult Full-fare	$8.50
Youth (5-18)	$6.00
School Groups Public	$2.00
School Groups Private	$2.00
Groups (non-school)	$6.00
Members	$0.00
(1) Events/Rental Visitors	$5.00
(2) Special Exhibit Fees	$12.54
Comp's	$0.00

(1) Events/Rental Visitors – It is assumed that visitors utilizing the Third Floor catering area, auditorium or other areas of the Third Floor will be charged a $5.00 fare which then enables them to participate in all aspects of The Leonardo on the Main and Second Floor.
(2). Special Exhibit Fees – The assumed net yield of the special exhibit ticket: The full fare adult cost of attending the special exhibit would be $12.00 plus the museum entrance cost of $6.00, for a total of $18.00.

Local Pricing Comparables – Many of the local museums do not charge admissions, relying instead on donations and parent institution subsidies. Discovery Gateway charges admissions, and is the most comparable to The Leonardo in terms of programs and exhibits and does not differentiate between adult and child pricing. The Leonardo assumes identical full fare pricing to Discovery Gateway, and a $1.50 discount for a child's admission. We also price The Leonardo at a $0.50 premium to Hogle Zoo, This is the Place Heritage Park, UMNH, and Clark Planetarium. It should be noted that our model pricing is set for mid-year 2010, whereas the data cited below are 2006-2007 prices.

Salt Lake City Museums with over 15,000 Annual Visitors

	AAM 2006 Att.	SLCCVB 2005 Att.	Adult Adm.	Child Adm.	Annual Family M'bership
Utah's Hogle Zoo	847,831	800,521	$8.00	$6.00	$65.00
This is the Place Heritage Park	n/a	376,600	$8.00	$6.00	$50.00
Wheeler Historic Farm	395,735	n/a	$0.00	$0.00	
Museum of Church History and Art	218,130	n/a	$0.00	$0.00	
Beehive House	200,000	81,512	$0.00	$0.00	
Red Butte Gardens	160,000	n/a	$5.00	$4.00	$55.00
Utah Museum of Fine Arts	109,920	70,522	$5.00	$3.00	$65.00
Discovery Gateway	287,000	n/a	$8.50	$8.50	$115.00
Tracy Aviary	70,000	106,100	$4.00	$2.50	$35.00
Utah State Historical Society	75,000		$0.00	$0.00	
Daughters of Utah Pioneers	36,263	284,420	$0.00	$0.00	
Salt Lake Art Center	15,000	18,937	$0.00	$0.00	$50.00
Chase Home Museum of Utah Folk Arts	15,000	n/a	$0.00	$0.00	
New Utah Museum of Natural History*	175,000	n/a	$8.00	$6.00	$70.00
Clark Planetarium	350,000	352,835	$8.00	$5.00	$99.00
Average	**211,063**	**261,431**			**$67.11**
Average of Institutions Charging Admission			**$6.81**	**$5.13**	
Median	**167,500**	**195,260**	**$4.00**	**$2.50**	**$65.00**

**** Data from UMNH 2008 Business Plan***

Industry Pricing Comparables – Most science centers and museums charge admission fees – 86.6% of the institutions reporting to ASTC in 2007 indicate that they charge admissions fees.

	% Charging General Admission	Median Fee for Adult	Median Fee for Child
All ASTC Respondents	86.6%	$7.59	$6.00
All Science Centers	86.8%	$8.53	$6.95
Respondents with Operating Expenses; between $2.5M and $6.5M (The Leonardo)	94.7%	$8.50	$7.00
Respondents by Interior Exhibit Space; 25,000 – 50,000 SF (The Leonardo)	91.7%	$8.95	$7.00

While marginally higher than 2006-2007 pricing in the local, Salt Lake City, market, The Leonardo's assumed ticket pricing is spot on the industry medians, again for 2006-2007 data, and it tracks consistently through the screens of all ASTC Respondents, responding science centers, operating expense size and interior exhibit space.

Fare Category Distribution – The next key variable in determining net ticket yield and thus admission revenue levels is fare category distribution, that is, of the projected attendees how many will purchase admissions at each of the various ticket prices. Our imputed fare category distributions are these:

Admissions Revenues are calculated as follows:

		YEAR 1		YEAR 2			YEAR 3	
Ticket Categories	Attendance Price	Category Split	200,000 Revenue	Category Split	Attendance	165,000 Revenue	Category Split	170,000 Revenue
Adult Full-fare	$8.50	42.00%	$714,000.00	42.00%	35,700	$303,450.00	42.00%	$606,900.00
Youth (5-18)	$6.00	20.00%	$240,000.00	20.00%	17,000	$102,000.00	20.00%	$204,000.00
School Groups Public	$2.00	10.00%	$40,000.00	10.00%	8,500	$17,000.00	10.00%	$34,000.00
School Groups Private	$2.00	3.00%	$12,000.00	3.00%	2,550	$5,100.00	3.00%	$10,200.00
Groups (non-school)	$6.00	4.00%	$48,000.00	4.00%	3,400	$20,400.00	4.00%	$40,800.00
Members	$0.00	12.00%	$0.00	12.00%	10,200	$0.00	12.00%	$0.00
Events/Rental Visitors	$5.00	3.00%	$30,000.00	3.00%	2,550	$12,750.00	3.00%	$25,500.00
Special Event Charge	$12.54			na	80,000	$1,003,200.00		
Comp's	$0.00	6.00%	$0.00	6.00%	5,100	$0.00	6.00%	$0.00
Special Event Up-Charge	$6.00							
Total		100.00%	$1,084,000.00	100.00%	165,000	$1,463,900	100.00%	$921,400.00
Yield			$5.42			$8.87		$5.42

Non-Ticket Earned Revenues

Non-ticket Earned Revenues are garnered from five sources:

1. Memberships
2. Catering activities utilizing the west side of the Third Floor.
3. Main Floor café operations.
4. Main Floor retail operations.
5. Miscellaneous rental fees such as coat and bag check and stroller rentals.
6. Fees paid by patrons for special workshops.

		Year 1	Year 2	Year 3
Attendance		200,000	165,000	170,000
	Assumptions:			
Memberships				
	1,000 per year			
	$75.00 each	$75,000	$75,000	$75,000
Catering				
Events per year	50			
Average Rental Cost per Event	$1,500.00			
Average attendance per Event	150			
Average Food Cost per Person	$20.00			
Total Food Cost per event	$3,000.00			
Total Rental Revenue	$75,000.00	$75,000.00	$75,000.00	$75,000.00
Total F&B Revenue	$15,000.00	$15,000.00	$15,000.00	$15,000.00
Total Catering Revenue	$90,000.00	$90,000.00	$90,000.00	$90,000.00
Café				
Net per visitor sales	$2.00			
Leo Share	10.00%			
Total Café Contribution		$40,000.00	$33,000.00	$34,000.00
Total Catering & Café Revenue		$130,000.00	$123,000.00	$124,000.00
Retail				
Sales per Visitor	$1.10	$220,000.00	$181,500.00	$187,000.00
Miscellaneous Rentals				
Per Patron rental fee	$0.15	$30,000.00	$24,750.00	$25,500.00
Up-Charges and Class Fees				
Classes /Year	156			
Net Yield Class	$20			
Average Attendance Class	8			
Total Contribution		$24,960.00	$27,456.00	$30,201.60

Operating Expenses

The Leonardo is very much a fixed cost operation. There are very few operating expenses which are tied directly to attendance assumptions. Our objectives of having frequent change and variety in programming and exhibits drive expenses largely independent of attendance. Similarly, building costs such as utilities, maintenance and security will vary little as a function of admissions numbers. Marketing expenses are not correlated strongly with attendance.

The following summary of the financial projections assumptions serve to highlight this critical characteristic of the operation.

Time-Line – A critical assumption in the financial projections, particularly for Ramp-up budgets, is the Project time line, which is assumed to be 16 month. Delaying or extending this time frame will add to the costs necessary to create the museum and add an untenable burden to fund raising requirements.

Operating Assumptions – The secondary, or operating, variables for The Leonardo operations are as follow:

Hours of Operation – Because of The Leonardo's commitment to providing the community with as high a degree of access as can be justified economically; this model assumes that the Building will be open to the public on this schedule:

Monday through Friday	10 am to 6 pm	8 operating hours
Saturday	10 am to 7 pm	9 operating hours
Sunday	11 am to 5 pm	6 operating hours
Total Operating Hours per week		54 operating hours

Staffing

Based on our experience in staffing Body Worlds and with The Leonardo operation to this point, we have created a staffing model comprised of approximately 48 full-time-equivalent positions. The Ramp-up payroll expenses total $1.2M for the assumed 16 month period. Year 1 personnel expenses total $1.76M. Salary levels have been established based on compensation comparables provided by Collier Financial. We have reduced our floor staff to about 10 positions reflecting the more self-guided nature of our exhibits. Our Body Worlds staffing experience has lead us to the conclusion that volunteers are available to assist with operations and help control payroll costs.

Building Expenses – Based on the historical numbers provided by the City in its 2000 RFP for re-use of the Building and subsequently supplied data from the City relative to *Body Worlds*, we have a good basis on which to budget Building related expenses. The operating expense assumptions for the Building are as follow:

Year One Building Expense Item:	Annual Amount
Utilities	$90,000
Janitorial Supplies (service – in-house)	$24,000
Security Services (in-house)	$0
Landscaping	$2,000
Building Insurance	$17,280
AC/Heating Tech's	$18,000
Kone Elevator and Escalator Maintenance Contract	$18,000
Dumpsters, Refuse	$6,000
Building Maintenance Contingency	$33,000
Total Building Expenses	$208,280

Year Two and Year Three expense numbers are increased by an annual cost escalation factor of 5.0%.

Exhibits and Programs Operating Expenses

	Ramp-up	Year 1	Year 2	Year 3
Ex Net Fees	$175,000	$0	$175,000	$175,000
Exhibits & Programs design, fabrication and installation	$2,325,000			
Exhibit Maintenance		$50,000	$50,000	$50,000
Temporary, Rotating, Exhibits		$100,000		$50,000
Special, Exhibit			$800,000	
Total	$2,400,000	$150,000	$1,025,000	$275,000

Budget Conclusion

• The Ramp-up Budget will total approximately **$5.0 M**. The 16 month timeline, February 09 to July 2010, will require that there is significant funding committed to The Leonardo in 2009.

• Earned revenues will fund approximately 50% of operating expenses in an average, stabilized year.

• Projected attendance and significantly pared back operating expenses combined result in annual operating shortfalls, which will necessitate contributions from the public or private sector on the order of **$1.5 M**, on average, each operating year. It is expected that we will fund approximately $1.0 M via public partnerships, leaving approximately $500,000 to be raised annually from private sources.

The optimal means of fulfilling the mission of The Leonardo is to pursue an effective, on-going development program; to initiate all means possible of generating earned revenues including the catering model, which can ameliorate our admissions risk; to undertake an effective, creative marketing campaign; and, most important, to create a Leonardo product (programming, exhibits, workshops, service standard and atmosphere) which will drive admissions and ensure the ultimate success and viability of The Leonardo. The introduction of ExNet exhibits will reduce the market risk of the Project by utilizing components that have a demonstrated track record of patron appeal.

The fixed cost nature of The Leonardo operation increases the Project's business risk. The business risk attendant to the Project makes it imperative to pursue an effective, on-going development program; to initiate all means possible of generating earned revenues including the catering model, which can ameliorate our admissions risk; to undertake an effective, creative marketing campaign; and, most important, to create a Leonardo product (programming, exhibits, workshops/studios, service standard and atmosphere) which will drive admissions. The introduction of Ex-Net Exploratorium exhibits will reduce the market risk of the Project by utilizing components that have a demonstrated track record of patron appeal.

Development Revenues

On-going fundraising or "development" for operations is a challenge all museums undertake as part of their normal business model. The American Association of Museum standard puts fundraising at 58% of a museum's annual operating budget. The Association of Science and Technology Centers puts the average at approximately 45% of total operations. The Leonardo's goal is about 46% or $1.5M on average per year.

Goals As is evident from the Statement of Activities, The Leonardo has two basic Development goals aimed at ensuring adequate funding for the Project:
(1). Is a $5M capital campaign aimed at funding the Ramp-up budget; and
(2.) An annual, ongoing development campaign which needs to produce on average $1.5M to bridge projected operating shortfalls.

Development Sources Funds needed to meet these two basic Development goals will come from corporate sponsorships; corporate in-kind donations; local and national foundations; public donations; annual giving and individual contributions; and fund raising events. The specific development goals for each of these areas are summarized below:

Summary of Ramp-up Capital Campaign Sources

SOURCE	TOTAL FUNDS	NUMBER OF DONORS
Lead Gifts (already in hand)	$1,150,000	2
Major Gifts	$2,000,000	2-3
Public Funding (non City)	$1,000,000	1
Individual Private Funding	$295,000	26
Foundation Funding	$275,000	4
Corporate Funding	$90,000	22
Naming Funding	$200,000	2
Fundraising Luncheon 2009	$25,000	
Total	$5,000,000	

The Leonardo's $5M capital campaign to opening requires City acceptance of the new architectural plan and business model as well as solid "green light" support for the project. The City administration and council must be active project champions for the capital campaign to succeed. Also critical is a strong Capital Campaign Cabinet and leadership and the full involvement of both The Leonardo's Board of Directors and Renaissance Board members. The plan is based on two signature contributions, one from a private donor or foundation and the other from public partnerships. Otherwise, private funding from individuals, foundations and corporations has been kept at conservative levels given the national economic climate. We will be engaging both current donors as well as newly cultivated donors, and business partnerships made possible by the success of the Body Worlds exhibit.

Key Assumptions

- The Capital Campaign goal is $5M.
- Lead gifts including the O.C. Tanner grant ($850,000) and the Micron grant ($300,000) have been secured toward the $5M goal.
- Public funding and a Major Gift are the keystones of the capital campaign.
- While there are over 20 features or areas in The Leonardo that can be named or sponsored, this plan only assumes two features will be named each for $100,000. Future naming income is not considered in either the capital or annual giving plans although a naming campaign will be undertaken with income to positively impact exhibit sponsorship.
- Individual, foundation, and corporate giving has been kept at conservative levels given the national economic environment.
- Positive City support, while not financial beyond the lease provisions, is assumed and required for success as The Leonardo asks the City to support other public and private requests and consider the project for on-going Community Development Area funds post opening.

Summary of Annual Post-Opening Fundraising Sources

SOURCE	TOTAL FUNDS	NUMBER OF DONORS
Public Funding (non-City)	$1,000,000	
Individual/Foundation	$360,000	46
Gala/Fundraising Event	$30,000	
Corporate Sponsorship	$85,000	50
Board Giving	$77,500	58
Total	$1,552,500	

The Leonardo's annual fundraising plan requires $1.5M yearly in on-going funding. The bulk of the funds will come from $1M in public contributions and $500,000 in private giving.

Key Assumptions

- Private funding will rely on both local and national sources. Once operational, The Leonardo will be able to apply for national foundation funding including the Department of Education, the National Science Foundation, and the Institute for Museum and Library Services as well as local individuals and foundations.
- The capital campaign assumes only two naming gifts secured. This leaves over 20 other features and exhibits available for sponsorship by corporations, individuals, or foundations that could additionally impact annual giving for exhibit development and rental.
- Leonardo da Vinci's birthday provides a wonderful opportunity for a yearly gala luncheon with national speaker focused on innovation and creativity. This yearly fundraising event will begin in 2009 to benefit the capital campaign.
- In all cases, there is a three-year progressive funding increase at the conservative level of 10% the 2nd year and 15% the third year.

The Development Challenge – The Leonardo is a member of the wider Utah non-profit sector. The National Center for Charitable Statistics in 2006 lists 5,248 public charities in the state. These entities have a wide variety of missions and are engaged in fundraising yearly. Private foundations in Utah are estimated to have over $1 billion in assets. In addition, while Utah's business community is growing substantially, compared to larger urban areas, it does not have a large number of corporate headquarters in the state. Therefore, it is obvious that in spite of generosity, worthy projects compete for funds. The Leonardo must provide an exceptional product that is compelling to state visitors and those outside Utah's borders in order to build a multi-faceted development program that is strategic and successful.

Appendix B:
Memorandum of Understanding

SLC CONTRACT #03-1-09-3439

MEMORANDUM OF UNDERSTANDING
between
SALT LAKE CITY CORPORATION
and
THE LEONARDO
regarding
THE OLD MAIN LIBRARY ON LIBRARY SQUARE

This Memorandum of Understanding ("MOU") is entered into this 27th day of August, 2008, by and between SALT LAKE CITY CORPORATION, a Utah municipal corporation (the "City"), and Library Square Foundation for Art, Culture, and Science, a 501c3 corporation ("The Leonardo").

RECITALS

1. The City and The Leonardo have invested resources toward establishing an art, science, and culture center in the Old Main Library on Library Square based on the acceptance of The Leonardo's proposal by the City. The language of the bond measure, the architectural contract, and other documents support this partnership.

2. The City and The Leonardo desire to address and resolve outstanding issues and questions regarding the future uses of the Old Main Library on Library Square. Among these issues is the eligibility of The Leonardo for the expenditure of voter approved bond funds and the financial viability of The Leonardo.

3. The City Administration and The Leonardo intend to reach a resolution of all issues in an expeditious manner, and will work in good faith, without publicly criticizing or maligning one another.

AGREEMENT

The City and The Leonardo agree that the recitals above are true in all respects and further understand and agree as follows:

A. The City and The Leonardo will consider a range of options for the Old Main Library, to include The Leonardo.

B. The City and The Leonardo will consider the phasing of projects and programs relating to the Old Main Library.

C. The Leonardo recognizes the City's responsibilities relating to the Old Main Library, to include, but not limited to: fiscal accountability and City building design standards.

D. The Leonardo will provide a report of its leadership team to the City, including management, Board development, and fund raising capacity.

E. The City will assemble and charge an effective project team to interface with The Leonardo team.

F. The Leonardo recognizes and accepts the City's responsibilities as building owner to ultimately decide on the management, design, and construction of the Old Main Library, provided these do not compromise the mission and effective functioning of The Leonardo.

G. At The Leonardo's request, the City may assign a representative to participate as an ex officio member of The Leonardo Board.

H. The City will not issue a formal Request for Proposal until the City and The Leonardo have fairly evaluated the potential for The Leonardo's use of the Old Main Library.

I. The Leonardo and the City will cooperate to accomplish the following in a timely manner:

a. Agree on the assumptions associated with The Leonardo's intended use of the Old Main Library – in order to facilitate effective review of building design and construction;

b. Develop and evaluate a building construction plan consistent with the use assumptions (above);

c. Assure Silver LEED requirements are included in the project design;

d. Confirm The Leonardo's bond match;

e. Assess and evaluate The Leonardo's business plan and business viability;

f. Develop project timelines and regular project reports; and

g. Development lease terms for The Leonardo's use of the Old Main Library.

h. The City agrees to review means to reimburse The Leonardo for architectural fees paid to date by The Leonardo.

DATED the day and year first above written.

SALT LAKE CITY CORPORATION

RECORDED

AUG 29 2008

CITY RECORDER

Ralph Becker
Mayor

ATTEST:

APPROVED AS TO FORM
Salt Lake City Attorney's Office
Date 8-29-08
By

Deputy City Recorder

SALT LAKE CITY, UTAH CORPORATE SEAL

THE LEONARDO

Marshall Wright
Chairman, Board of Directors

ACKNOWLEDGMENT

STATE OF UTAH)
:
COUNTY OF SALT LAKE)

On this 27th day of August, 2009, personally appeared before me Marshall Nelson Wright,

__who is personally known to me,
__whose identity I verified on the basis of Driver License
__whose identity I verified on the oath/affirmation of _____, a credible witness,

to be the signer of the foregoing document, and he/she acknowledge that he/she signed it.

SCOTT C. CRANDALL
NOTARY PUBLIC - STATE OF UTAH
451 SO. STATE STREET, RM 415
SALT LAKE CITY, UT 84111
My Comm. Exp. 06/27/2011

Notary Public

My Commission Expires: 6/27/2011

Salt Lake City Corporation
Contract Activation

Contract Nbr: 03 1 09 3439 Status: A City Wide: N

Title: MOU - THE OLD MAIN LIBRARY ON LIBRARY SQUARE

Vendor 35880 LEONARDO, THE

Dept Contact: RICK GRAHAM

Starts: 8/27/2008 Ends:

Term: Units:

Limit: $0.00

Contract Activation was successful.

Appendix C:
SLC's Old Main Library Renovation

SLC'S OLD MAIN LIBRARY RENOVATION

23-Jan-09

SCOPE AND COST SUMMARY - JOB # 652301

		February Hybrid	September New Scope	1-15-09 Mutual Scope	Notes
	Building Cost Summary				** Limited to Scope Items Listed**
	02 Siteworks & Demolition	$ 731,993	$ 233,573	$ 374,989	
	03 Concrete	$ 88,441	$ 39,196	$ 39,196	
	04 Masonry	$ 39,000	$ 39,000	$ 39,000	
	05 Metals	$ 243,255	$ 61,240	$ 72,200	
	06 Woods & Plastics	$ 224,544	$ 43,120	$ 48,120	
	07 Thermal & Moisture Protection	$ 391,469	$ 264,991	$ 296,213	
	08 Doors & Windows	$ 158,242	$ 141,612	$ 146,282	
	09 Finishes	$ 1,003,064	$ 240,778	$ 300,552	
	10 Specialties	$ 174,942	$ 72,766	$ 72,766	
	11 Equipment	$ 50,000	$ -	$ -	
	12 Furnishings	$ 61,554	$ 6,257	$ 6,257	
	13 Special Construction	$ 1,062,893	$ 1,800,000	$ 1,226,260	
	14 Conveying System	$ 108,000	$ 35,000	$ 168,000	
	15 Mechanical	$ 2,715,936	$ 2,610,481	$ 2,663,681	
	16 Electrical	$ 2,269,350	$ 625,000	$ 1,520,684	
	Sub Total	$ 9,322,683	$ 6,213,014	$ 6,974,199	
	General Conditions (9% & 6%)	$ 839,041	$ 372,781	$ 418,452	
	Overhead & Profit (4%)	$ 372,907	$ 248,521	$ 278,968	
	Design Contingency & Bid Package Incr (10%)	$ 932,268	$ 621,301	$ 348,710	
	Total Remodel Construction Cost	$ 11,466,899	$ 7,455,617	$ 8,020,329	
L11	LEED	$ 301,900	$ -	$ 135,000	Includes $100k for documentation
L12	SHPO Allowance	$ 150,000	$ -	$ 150,000	
L13	Subtotal Construction Cost	$ 11,918,799	$ 7,455,617	$ 8,305,329	
L14	Inflation (to Feb '09)	$ 2,562,542	$ -	$ 289,682	
L15	**Total Construction Cost**	**$ 14,481,341**	**$ 7,455,617**	**$ 8,595,011**	
L16	Soft Costs				
L17	Project Programming Expenses thru 07/07	$ 350,000	$ 337,000	$ 350,000	additional study costs incurred
L18	Demolition Permit	$ 2,165	$ 2,300	$ 2,300	
L19	Plan Check Fees	$ 42,756	$ 17,800	$ 28,689	
L20	Building Permit	$ 65,779	$ 27,500	$ 44,137	
L21	1% State Permit Fee	$ 658	$ 300	$ 441	
L20A	Impact Fees	$ 100,000	$ 30,000	$ 30,000	
L21B	Geotechnical/Soil Study	$ 30,000	$ 30,000	$ 30,000	Seismic
L22	Environmental Studies/Remediation	$ 10,000	$ 10,000	$ 10,000	
L23	City Engineering Mgt Fee (1.5%)	$ 217,220	$ 111,834	$ 128,925	
L24	Project Delivery System	$ 340,000	$ -	$ 340,000	ESCO Coordination
L25	Architectural Design Fees 7%	$ 1,303,321	$ 521,893	$ 601,651	
L26	Architectural Reimbursables	$ 75,000	$ 15,000	$ 40,000	

SCOPE AND COST SUMMARY - JOB # 652301

		February Hybrid	September New Scope	1-15-09 Mutual Scope	Notes
L3	Braced frame additional cost			$ 594,519	
L3	#3 Auditorium Renovation	$ 767,190	$ 522,288	$ 646,178	
	ADD LEO Prioritized alternates here				
L8	Total Alternates	$ -	$ -	$ 1,240,698	
L9	**Total Project Cost with Alternates**	**$ 18,826,797**	**$ 9,032,025**	**$ 12,487,304**	
	02 SITEWORK & DEMOLITION				
	Demolition				
L33	Remove Existing stairs	$ 13,896	$ -		
L34	Wall sawcutting 8"	$ 1,572	$ 1,572	$ 1,572	$ 594,519
L35	Wall sawcutting 12"	$ 593	$ 593	$ 593	$ 11,246,606
L36	Remove existing lockers	$ -	$ 225	$ -	$ 11,841,125
L37	Demolish escalator	$ 50,000	$ -		
L38	Demo millwork	$ 3,679	$ -		
L39	Remove existing dumbwaiter	$ 5,000	$ -		
L40	Demo escalators ceiling	$ 2,166	$ -		
L41	Demo exterior glazing at shearwalls	$ 9,243	$ 9,243	$ 9,243	
L42	Demo planter wall	$ 2,849	$ -		
L43	Demo planter at parking garage	$ 500	$ -		
L44	Asbestos abatement	$ 260,000	$ 80,000	$ 135,000	
L45	Demo plumbing fixtures	$ 1,560	$ -	$ 1,560	
L46	Demo stepped slab	$ 8,531	$ -		
L47	Demo ceiling coves	$ 22,911	$ -	$ 22,911	shorten coves at seismic braces
L48	Remove escalators framing members	$ 5,700	$ -		
L49	Demo soffit glazing	$ 612	$ -		
L50	Demo N & S vestibules (tempered glass)	$ 1,134	$ -	$ 1,134	
L51	Demo concrete wall at stairwell perimeter	$ 1,140	$ -		
L52	Sawcut concrete wall at stairwell perimeter	$ 1,179	$ -		
L53	Remove Existing roof	$ 23,108	$ 23,108	$ 29,859	
L54	Electrical demolition	$ 82,914	$ 44,327	$ 82,914	full electrical scope
L55	Mechanical demolition	$ 41,457	$ 41,457	$ 41,457	
L56	Demo interior wall	$ 59,202	$ -		
L57	Painting protection	$ 5,000	$ 5,000	$ 5,000	
L58	Miscellaneous sawcutting	$ 10,000	$ 10,000	$ 10,000	
L59	**Subtotal demolition**	**$ 613,946**	**$ 215,525**	**$ 341,243**	
L60	**Earthwork**				
L61	Site repair	$ 100,000	$ -	$ -	
L61a	New Sanitary Sewer			$ 10,000	
L62	**Subtotal earthwork**	**$ 100,000**	**$ -**	**$ -**	
L63	**Site concrete**				
L64	Repair concrete steps	$ 4,913	$ 4,913	$ 10,611	
L64a	Cut in pedestrian access at site wall			$ 10,000	
L65	Curb cut at vehicle access	$ 11,875	$ 11,875	$ 11,875	
L66	Pedestrian walk at vehicle access	$ 1,260	$ 1,260	$ 1,260	
L67	**Subtotal Site concrete**	**$ 18,048**	**$ 18,048**	**$ 33,746**	
L68	**TOTAL SITEWORK & DEMOLITION**	**$ 731,994**	**$ 233,573**	**$ 374,989**	
	03 CONCRETE				

SCOPE AND COST SUMMARY - JOB # 652301

		February Hybrid	September New Scope	1-15-09 Mutual Scope	Notes
L69	Miscellaneous concrete repair	$ 30,000	$ 30,000	$ 30,000	
L70	Floor patch	$ 8,291	$ 9,196	$ 9,196	
L71	Floor infill	$ 50,150	$ -		
L72	**TOTAL CONCRETE**	**$ 88,441**	**$ 39,196**	**$ 39,196**	
	04 MASONRY				
L73	CMU Infills	$ 39,000	$ 39,000	$ 39,000	
L74	**TOTAL MASONRY**	**$ 39,000**	**$ 39,000**	**$ 39,000**	
	05 METALS				
L75	New stairs	$ 43,700	$ -		
L76	Landing at stairs	$ 15,860	$ -		
L77	Free standing railing at interior locations	$ 90,650	$ -		
L78	Modify existing railings	$ 19,240	$ 19,240	$ 22,200	
L79	Wall mounted railing	$ 35,805	$ -		
L80	Exising firestair rail to code	$ 6,000	$ 10,000	$ 10,000	
L81	Miscellaneous steel	$ 32,000	$ 32,000	$ 40,000	
L82	**TOTAL METALS**	**$ 243,255**	**$ 61,240**	**$ 72,200**	
	06 WOOD & PLASTICS				
	Carpentry				
L83	Wood plates & blocking	$ 50,600	$ 12,880	$ 12,880	
L84	Fire-rated plywood backing	$ 108,944	$ 30,240	$ 30,240	
L85	**subtotal carpentry**	**$ 159,544**	**$ 43,120**	**$ 43,120**	
	Millwork				
L86	Ticket counter	$ 20,000	$ -		use existing
L87	Coat room shelving	$ 20,000	$ -		use existing
L88	Miscellaneous millwork	$ 25,000	$ -	$ 5,000	re attaching wood paneling
L89	**Subtotal for millwork**	**$ 65,000**	**$ -**	**$ 5,000**	
L89A	**TOTAL WOOD & PLASTICS**	**$ 224,544**	**$ 43,120**	**$ 48,120**	
	07 THERMAL & MOISTURE PROTECTION				
L90	R-30 Rigid insulation	$ 58,419	$ 58,419	$ 68,805	
L91	R-19 sprayed in at 3d floor plenum	$ 68,635	$ 68,635	$ 68,635	
L92	Exterior wall at 2nd floor, stud. Gyp. Insulation	$ 103,358	$ -		
L93	Sound Batt	$ 11,960	$ 3,840	$ 3,840	
L94	Singly ply roof membrane	$ 58,419	$ 58,419	$ 68,805	
L95	Tray garden waterproofing repair	$ 15,000	$ -		see division 13
L96	Metal wall cap (Kynar)	$ 14,153	$ 14,153	$ 17,853	
L97	Metal flashings	$ 21,525	$ 21,525	$ 23,275	
L98	Cap at precast panels & misc. repair	$ 25,000	$ 25,000	$ 25,000	
L99	Caulking & sealants	$ 15,000	$ 15,000	$ 20,000	
L100	**TOTAL THERMAL & MOISTURE**	**$ 391,469**	**$ 264,991**	**$ 296,213**	
	08 DOORS & WINDOWS				
L101	New interior single wood doors	$ 11,400	$ 3,270	$ 3,270	
L102	Sound door single	$ 2,900	$ -		
L103	New double aluminium doors 6x7	$ 7,700	$ 7,700	$ 7,700	
L104	N/S entrance mod 8x10 aluminium doors	$ 11,200	$ -	$ -	
L105	N/S entrance new storefront - tempered	$ 21,718	$ 21,718	$ 21,718	
L106	New hardware at existing door	$ 10,000	$ 10,000	$ 10,000	

SCOPE AND COST SUMMARY - JOB # 652301

		February Hybrid	September New Scope	1-15-09 Mutual Scope	Notes
L107	Modification at existing entry doors	$ -	$ 5,600	$ 5,600	
L108	Replace stairwell doors w/ rated doors	$ 26,100	$ 26,100	$ 26,100	
L109	Interior glazing 3d floor enclosure	$ 28,614	$ 28,614	$ 28,614	
L110	Repair existing glazing	Done prior			
L111	Re-install glazing at concrete shearwall	$ 38,610	$ 38,610	$ 43,280	necessary for braced frame
L112	**TOTAL DOORS & WINDOWS**	**$ 158,242**	**$ 141,612**	**$ 146,282**	
	09 FINISHES				
L113	6" Metal stud interior partition	$ 63,700	$ 22,800	$ 22,800	
L114	6" Metal stud furring at exterior wall	$ 24,255			
L115	Shaftwall at mechanical shaft	$ 31,652		$ 6,000	shaftwall repair due to construction
L116	Minimum café fitout	$ 35,000			
L117	5/8" abuse resistant gypsum	$ 37,700	$ 25,600	$ 25,600	
L118	Tie in new walls at existing	$ 5,400	$ 2,000	$ 2,000	
L119	Patch and repair exisiting walls	$ 40,233	$ 5,500	$ 5,500	
L120	Suspended gyp board ceiling	$ 3,060	$ 3,060	$ 3,825	
L121	Gypsum soffits - 2nd fl. sphere humanity	$ 13,900			
L122	Acoustical spray waffle slab	$ 33,750			
L123	Skim patch existing ceiling	$ 1,161	$ 1,161	$ 1,419	
L124	Texture existing beams	$ 55,787	$ 55,787	$ 92,536	Register Surrounds
L125	New ceiling cove with metal at escalator	$ 25,270			
L126	6x6 Unistrut frame	$ 220,199			
L127	Acoustic ceiling	$ 14,250			
L128	Ceramic floor tile at restroom	$ 7,650	$ 7,650	$ 10,350	
L129	Ceramic tile base	$ 2,280	$ 2,280	$ 2,280	
L130	Ceramic wall tile at restrooms	$ 20,064	$ 20,064	$ 20,264	
L131	Carpet	$ 151,904	$ 10,500	$ 10,500	
L132	Resilient flooring	$ 109,980	$ 36,300	$ 36,300	
L133	Rubber base	$ 16,486	$ 1,450	$ 1,450	
L134	Paint/stain doors & frames	$ 3,510	$ 3,510	$ 3,510	
L135	Paint/stain existing doors & frames	$ 2,850	$ 2,850	$ 2,850	
L136	Paint interior masonry	$ 1,771	$ 1,771	$ 1,771	
L137	Paint interior gyp	$ 25,998	$ 8,000	$ 8,000	
L138	Paint ceiling	$ 3,960	$ 495	$ 495	
L139	Paint existing ceiling beams	$ 41,123			
L140	Paint exposed ceiling	$ 7,079	$ -		
L141	Architectural repair at shearwalls	$ -	$ 30,000	$ 30,000	Drag Strut repair
L141a	Mechanical area clean, paint			$ 10,000	
L142	Seal interior concrete	$ 3,102	$ -	$ 3,102	House keeping
L143	**TOTAL FINISHES**	**$ 1,003,074**	**$ 240,778**	**$ 300,552**	
	10 SPECIALTIES				
L144	Fire extinguisher	$ 2,346	$ 2,346	$ 2,346	
L145	Chain link @ storage area	$ 2,590	$ 2,590	$ 2,590	
L146	Toilet partition ADA	$ 5,100	$ 5,100	$ 5,100	
L147	Toilet partition standard	$ 11,250	$ 11,250	$ 11,250	
L148	Toilet partition doors at 2nd & 3d floor	$ 7,000	$ 7,000	$ 7,000	
L149	Urinal screens	$ 1,800	$ 1,800	$ 1,800	
L150	Grab bars	$ 1,170	$ 1,170	$ 1,170	
L151	Restroom mirrors	$ 152	$ 152	$ 152	
L152	Toilet tissue dispensers	$ 1,950	$ 1,950	$ 1,950	
L153	Electric hand dryers		$ 11,200	$ 11,200	
L154	Locker bench	$ 1,308	$ 1,308	$ 1,308	

SCOPE AND COST SUMMARY - JOB # 652301

		February Hybrid	September New Scope	1-15-09 Mutual Scope	Notes
L155	Relocate exisitng lockers	$ 1,900	$ 1,900	$ 1,900	
L156	Double tiered metal lockers	$ 17,200		$ -	
L157	Identifying devices	$ 50,000	$ 25,000	$ 25,000	
L158	**TOTAL SPECIALTIES**	**$ 103,766**	**$ 72,766**	**$ 72,766**	
	The total in estimate is:	$ 174,942			
	11 EQUIPMENT				
L160	Kichen exhaust	$ 50,000	$ -	$ -	
L161	**TOTAL EQUIPMENT**	**$ 50,000**	**$ -**	**$ -**	
	12 FURNISHINGS				
L162	Roller shades 1st floor	$ 55,920			
L163	Entrance Mat	$ 5,634	$ 5,634	$ 5,634	
L164	Shower curtains	$ -	$ 623	$ 623	
L165	**TOTAL FURNISHINGS**	**$ 61,554**	**$ 6,257**	**$ 6,257**	
	13 SPECIAL CONSTRUCTIONS				
L166	Tray garden repair	$ 25,000	$ -	$ 50,000	replacement
L167	Water feature at tray garden (donor)	$ 75,000	$ -		
	Seismic Upgrade			$ 1,176,260	
L168	Pile cap	$ 15,400			
L169	Micropiles at new footings	$ 132,600			
L170	Core drilling at existing footing/slab	$ 20,400			
L171	18" conc.shear wall full height - 5,000 PSI	$ 491,535			
L172	Reinforce pre-cast panels - angle @ 2 fl.s	$ 87,089			
L173	Epoxy dowel at existing beams	$ 103,493			
L174	Epoxy dowel connection at foundation wall	$ 77,814			
L175	Epoxy dowel connection at columns	$ 24,563			
L176	Core drilling at floor beam	$ 5,000			
L177	Miscallaneous sawcutting	$ 5,000			
L178	**TOTAL SPECIAL CONSTRUCTIONS**	**$ 1,062,894**	**$ 1,800,000**	**$ 1,226,260**	
	14 CONVEYING SYSTEMS				
L179	Return 2 elevators to normal operations	$ 108,000	$ -	$ 108,000	
L180	Escalator renovation 2-3d floor	$ -	$ 35,000	$ 60,000	
L181	**TOTAL CONVEYING SYSTEMS**	**$ 108,000**	**$ 35,000**	**$ 168,000**	
	15 MECHANICAL				
	HVAC				
	Air handler - 120,000 CFM	$ 474,000	$ 474,000	$ 474,000	
	Air Handler - 40,000 CFM	$ 158,000	$ 158,000	$ 158,000	
	Cooling tower on roof w/coil	$ 60,000	$ 60,000	$ 60,000	
	Repair exisitng ductwork	$ 92,127	$ 92,127	$ 92,127	
	New pumps	$ 45,000	$ 45,000	$ 45,000	
	New reheats at shaftwall penetration	$ 270,000	$ 270,000	$ 270,000	
	Heat exchanger	$ 65,000	$ 65,000	$ 65,000	
	Connect to plant piping	$ 20,000	$ 20,000	$ 20,000	
	Hydronic piping	$ 244,137	$ 244,137	$ 244,137	
	Valves	$ 13,650	$ 13,650	$ 13,650	
	General cleanup of motors, belts, valves	$ -	$ -	$ -	
	Add fire smoke dampers at shaft penetrations	$ -	$ -	$ -	
	Smoke evac system - Smoke detect. In Div. 16	$ 250,000	$ 250,000	$ 250,000	
	Smoke control system	$ -	$ -	$ -	
	New ductwork	$ 275,000	$ 275,000	$ 275,000	

SCOPE AND COST SUMMARY - JOB # 652301

		February Hybrid	September New Scope	1-15-09 Mutual Scope	Notes
	Ductliner	$ 51,475	$ 51,475	$ 51,475	
	Temperature controls	$ 244,137	$ 244,137	$ 244,137	
	Control modifications	$ -	$ -	$ -	
	Exhaust fans medium	$ 21,900	$ 21,900	$ 21,900	
	Fire dampers at 3d floor penetration	$ 50,000	$ 50,000	$ 50,000	
	New registers and grilles	$ 15,500	$ 15,500	$ 15,500	
	Utility metering	$ 20,000	$ 20,000	$ 20,000	
	Outdoor air monitoring	$ 23,500	$ 23,500	$ 23,500	
	Test and balance	$ 16,350	$ 16,350	$ 16,350	
L182	**TOTAL HVAC**	**$ 2,409,776**	**$ 2,409,776**	**$ 2,409,776**	
L183	**Fire Sprinklers Modifications Only**	**$ 124,371**	**$ 88,673**	**$ 88,673**	
	Plumbing				
	Toilets ADA	$ 2,880	$ 2,880	$ 2,880	
	Toilets Standards	$ 6,800	$ 6,800	$ 6,800	
	Waterless urinals	$ 16,500	$ 16,500	$ 16,500	
	Showers- Bikers	$ 3,800	$ 3,800	$ 3,800	
	Lavs	$ 2,650	$ 2,650	$ 2,650	
	New faucets at existing lavs	$ 1,590	$ 1,590	$ 1,590	
	3d floor handicap toilets	$ 16,000	$ 16,000	$ 16,000	
	One compartment sink at exhibits	$ 2,320	$ 2,320	$ 2,320	
L184	Restroom repair allowance	$ 50,000	$ -	$ 50,000	
	Wall mounted lavs	$ 1,995	$ 1,995	$ 1,995	
	Thermostatic mixing valves	$ 7,800	$ 7,800	$ 7,800	
L185	Sink rough-in	$ 1,325	$ -		
	Floor drains	$ 2,000	$ 500	$ 500	
	Mop sink	$ 2,040	$ 680	$ 680	
	Water lines	$ 30,880	$ 23,160	$ 23,160	
	Waste/Vent lines	$ 31,410	$ 23,557	$ 23,557	
	Clean & flush lines	$ 1,800	$ 1,800	$ 5,000	
L186	**TOTAL PLUMBING**	**$ 181,790**	**$ 112,032**	**$ 165,232**	
L187	**TOTAL MECHANICAL**	**$ 2,715,937**	**$ 2,610,481**	**$ 2,663,681**	
	16 ELECTRICAL (EC for hybrid, Spectrum for new scope)				
L188	New fire alarm system	$ 189,960	$ 225,000	$ 225,000	
L189	New main electrical service	$ -	$ 175,000		
L190	Lighting retrofit (new lamps and ballast in exisitng fixtures)		$ 150,000		
L191	Lighting controls	$ -	$ 75,000		
L192	Service and distribution	$ 391,540		$ 391,540	
L193	Power	$ 244,137		$ 244,137	
L194	Lighting (track heads in exhibit budget)	$ 829,143		$ 489,572	
L195	Telecommunication	$ 244,137			
L196	PA system	$ 64,489		$ 64,489	
L198	Security - card access & CCTV	$ 105,946		$ 105,946	
L199	PV system allowance	$ 200,000			
L200	**TOTAL ELECTRICAL**	**$ 2,269,352**	**$ 625,000**	**$ 1,520,684**	
	Alternate #1 - Auditorium Renovation				
A1	Auditorium carpet	$ 13,261	$ 13,261	$ 13,261	
A2	New stage floor structure	$ 13,104	$ 13,104	$ 13,104	
A3	New stage stairs	$ 1,779	$ 1,779	$ 1,779	

SLC'S OLD MAIN LIBRARY RENOVATION

23-Jan-09

SCOPE AND COST SUMMARY - JOB # 652301

		February Hybrid	September New Scope	1-15-09 Mutual Scope	Notes
A4	HVAC Upgrade	$ 49,445	$ 49,445	$ 49,445	
A5	Electrical power	$ 4,604	$ 4,604	$ 4,604	
A6	Electrical lighting	$ 23,700	$ 23,700	$ 23,700	
A7	New stage lighting	$ 150,000	$ 150,000	$ 150,000	
A8	Special systems	$ 2,899	$ 2,899	$ 2,899	
A9	Sound	$ 3,069	$ 3,069	$ 3,069	
A10	Reupholster existing fixed seating	$ 37,500	$ -	$ 37,500	
A11	New auditorium sound reinforcement	$ 50,000	$ 50,000	$ 50,000	
A12	Auditorium finish repair	$ 32,907	$ 32,907	$ 32,907	
A13	**Subtotal**	**$ 382,268**	**$ 344,768**	**$ 382,268**	
A14	**General conditions (6%)**	$ 22,936	$ 20,686	$ 22,936	
A15	**Overhead & profit (5%)**	$ 15,291	$ 17,238	$ 19,113	
A16	**Design contingency (10%)**	$ 57,340	$ 34,477	$ 38,227	
A17	**Inflation to Feb '09 (5.5%)**	$ -	$ 18,962	$ 21,025	
A18	**Inflation to summer '07**	$ 143,350	$ -	$ 76,453	Inflation from 06' to 2/08
A19	**Total Construction Cost**	**$ 621,185**	**$ 436,132**	**$ 560,022**	
A20	**Plan check fees**	$ 3,052	$ 2,143	$ 2,143	
A21	**Building permit**	$ 4,695	$ 3,296	$ 3,296	
A22	**1% State permit fee**	$ 47	$ 33	$ 33	
A23	**City Engineering Mgt fee 1.5%**	$ 9,318	$ 6,542	$ 6,542	
A24	**Architectural design fees (9% - 7%)**	$ 55,906	$ 30,529	$ 30,529	
A25	**Owner's construction contingency (10%)**	$ 62,118	$ 43,613	$ 43,613	
A26	**Special inspection and testing 0.75%**	$ 4,659	$ -		
A27	**Art 1%**	$ 6,212	$ -		
A28	**TOTAL COST ALTERNATE #1**	**$ 767,192**	**$ 522,288**	**$ 646,178**	

Appendix D:
Preliminary LEED-CI Project Checklist

The Leonardo at Library Square
Preliminary LEED-CI Project Checklist
1/22/2009

Sustainable Sites

	Possible Points	confidence 0-40% = 0 41-65% = ? 66-100%= 1	Responsible Party	Project Notes
credit 1 **Site Selection (3 points possible)**				
Select a LEED Certified Building (3 points) **OR** Locate the tenant space in a building that has in place two or more of the following characteristics at time of submittal:	0	10%	CRSA	not applicable
A. Brownfield Redevelopment (1/2 point) A building developed on a site that has been deemed a brownfield & remediated OR documented by ASTM E1903-97	0	10%	CRSA	
B. Stormwater Management: Rate & Quantity (1/2 point) Building which prior development had: Less than or equal to 50% imperviousness & has implemented a stormwater management pan that equals or is less than the pre-development 1.5 year, 24 hour rate & quantity discharge. **OR** If greater than 50% imperviousness, has implemented a stormwater management plan that reduced 1.5 year, 24 hour rate & discharge by 25% of the annual stormwater load.	0	10%	CRSA	Existing site will not comply- no site alterations planned.
C. Stormwater Management: Treatment (1/2 point) A building with site stormwater treatment systems designed to remove 80% of the average annual TSS and 40% average annual TP.	0	10%	CRSA	Existing site will not comply- no site alterations planned.
D. Heat Island Reduction, Non-Roof (1/2 point) A building that provides shade within 5 years of installation and/or uses materials with a Solar Reflectance Index (SRI) of at least 30, and/or open grid pavement that equals at least 30% of the site's non-roof impervious surfaces. **OR** Has a minimum of 50% of parking spaces underground or covered by structural parking **OR** Used an open-grid pavement system (less than 50% imperviousenss) for 50% of the parking lot	0.5	70%	CRSA	No above ground dedicated parking.
E. Heat Island Reduction, Roof (1/2 point) A building with roofing having a Solar Reflectance Index (SRI) greater than or equal to 78(low-slope) or 29(steep-slope) for 75% or more of the roof **OR** a building with a "green" roof for at least 50% of the roof **OR** a building having a combination high SRI and vegetated roof that satisfy a specific area requirement calculation	?	50%	CRSA	Point addresses the existing building prior to work being done. Check for possibility of gaining point since the roof is being replaced.
F. Light Pollution Reduction (1/2 point) A building that meets or exceeds IESNA requirements for light levels, uniformity, exterior luminares, & having no light crossing the property boundary.	0	10%	CRSA	Exterior lighting will likely not comply and no exterior lighing changes or possible retrofit of interior lighting planned.
G. Water Efficient Irrigation: Reduced Potable Water Consumption (1/2 point) A building with high-efficiency irrigation technology OR uses captured rain or recycled site water to reduce potable water consumption by 50%.	0	10%	CRSA	Existing landscaping will not comply and no new landscaping or new or rennovated irrigation system planned.
H. Water Efficient Irrigation: No Potable Use or No Irrigation (1/2 point) A project eliminating all potable water use for site irrigation OR does not have permanent landscaping irrigation systems	0	10%	CRSA	Existing builidng will not comply and cistern to catch rainwater not planned- may be difficult to catch and store sufficient water.
I. Innovative Wastewater Technologies (1/2 point) A building that reduces the use of municipally provided potable water for building sewage conveyance by 50% OR treats 100% of wastewater on-site to tertiary standards.	0	10%	CRSA	not available in this area
J. Water Use Reduction: 20% (1/2 point) A building that meets the 20% reduction in water use for the entire building and has an ongoing plan to require future tenants to comply,.	0	10%	CRSA	Existing Fixtures will not meet requirements.
K. Onsite Renewable Energy (up to 1 point) A building that supplies at least 5% of the buildings total energy use through on-site renewable enegry syustems 5%(1/2 point) or 10%(1 point)	0.5	70%	CRSA	Point addresses the existing building prior to work being done. Check for possibility of gaining point if PV panels are added- or if we should address this as an ID point.
L. Other Quantifiable Environmental Performance (1/2 point) A building that had in place at the time of selection other quantifiable environmental performance for which the requirements may be found in other LEED rating systems.	0	10%	CRSA	
credit 2 **Development Density & Community Connectivity (1 point possible)** Channel development to urban areas with existing infrastructures, protecting greenfields and preserving habitat and natural resources. An existing development density of 60,000 SF/acre (2 story downtown development). **OR** Select a space in a building located within 1/2 mile of a residential zone or neighborhood with a goal density AND with pedestrian access to at least 10 basic services within 1/2 mile	1	70%	CRSA	Confirm area adjacency and density of residential zone
credit 3 **Alternative Transportation (1 point possible)**	1	70%	CRSA	Verify location of bus and light rail stations
3.1 Public Transportation Access Building within 1/2 mile of commuter rail or 1/4 mile of two or more bus lines				
3.2 Bicycle Storage & Changing Rooms Provide secure bicycle storage, with convenient changing/showering facilites (within 200 yards of the bldg) for 5% or more or the tenant occupants	1	70%	CRSA	
3.3 Parking Availability Case A: If occupying less than 75% of the building, parking spaces not to exceed minimum required by zoning AND priortiy parking for carpools provided for 5% of tenant occupants Case B: If occupying 75% or more of the building, parking capacity not to exceed minimum zoning AND priority parking for carpools provided for 5% of tenant occupants **OR** not new parking for rehabilitation projects AND preferred parking for carpools capable of serving 5% of building occupants	1	70%	CRSA/Client	1

Water Efficiency

	Possible Points	confidence 0-40% = 0 41-65% = ? 66-100%= 1	Responsible Party	Project Notes
credit 1 **Water Use Reduction**				
Maximize water efficiency within thenant spaces.				
1.1. 20% Reduction	**1**	80%	**Mechanical**	Calculations to confirm reduction.
Reduce water use by 20% over EPA 1992 requirements				
1.2. 30% Reduction	**?**	50%		Not all fixtures will be replaced.
Reduce water use by 30% over EPA 1992 requirements				

Energy & Atmosphere

	Possible Points	confidence 0-40% = 0 41-65% = ? 66-100%= 1	Responsible Party	Project Notes
prereq 1 **Fundamental Commissioning**	**req'd**	60%	**Authority**	Requires involvement of commx agent.
prereq 2 **Minimum Energy Performance**	**req'd**	60%	**Mechanical**	Needs review if available with existing system.
Establish the minimum level of energy efficiency for the base bldg& systems. Comply with ASHRAE/IESNA 90.1-2004.				
prereq 3 **CFC Reduction in HVAC&R Equipment**	**req'd**	60%	**Mechanical**	Needs review of exisitng system.
Reduce ozone depletion. Zero CFC-based refrigerant.				
credit 1 **Optimize Energy Performance (1-7 points possible)**				
Achieve increasing levels of energy performance above the prerequisite standard to reduce environmental impacts associated with excessive energy use.				
Create baseline off of ASHRE 90.1.				
1.1 Lighting Power (1-3 points possible)	**?**	50%	**Electrical**	Review lighting renovations-lamp replacements planned by ESCO may not be enough.
Option A Reduce lighting power density to 15% below the standard (1 point)				
Option B Reduce lighting power density to 25% below the standard (2 points)				
Option C Reduce lighting power density to 35% below the standard (3 points)				
1.2 Lighting Controls (1 point)	**1**	70%	**Electrical**	Lighting controls removed in estimate, however included in ESCO report for offices, restroom, and multi use areas.
Install daylight responsive controls in all regularly occupied spaces wtihin 15 feet of windows and under skylights.				
1.3 HVAC (2 points possible)				
Option A- Implement one or both of the following:				
Equipment Efficiency (1 point)	**1**	60%	**Mechanical**	New mech system to meet requirements. ESCO upgrades may meet- mech engineer to review and confirm.
Install HVAC systems which comply with the efficiency requirements in the Advanced Buildings: Energy benchmark for High Performance Buildings perscriptive criteria for mechancial equipment efficiency requirements				
Appropriate Zoning and Controls (1point)	**1**	60%	**Mechanical**	Needs confirmation of HVAC engineer- new system should accommodate this, review ducting and zoning of current system.
Every Solar Exposure mush have a separate contol zone, interior spaces must be separately zoned, and private offices and specialty occupancies (conf. rooms, kitchens) must have active controls capable of sensing space use and modulating HVAC system in response to space demand				
Option B-	**1**	60%	**Mechanical**	Reasonable with new mechanical system- may be difficult with ESCO upgrades to confirm with mech
HVAC system component performance criteria used are 15% better than ASHRAE/IESNA 90.1-2004 (1 point)				
OR HVAC system component performance criteria used are 30% better than ASHRAE/IESNA 90.1-2004 (2 points)	**?**	50%	**Mechanical**	May be possible with new mechanical system- not likely with ESCO upgrades only.
1.4 Equipment & Apliances (2 points possible)				
For all Energy Star elegible equipment and appliances installed in the project, appliances, office equipment, electronics (excluding HVAC, lighting and builidng envelope):				
70%, by rated-power Energy Star rated equipment and appliances (1 point)	**1**	60%	**Client**	Requires Energy Star Appliances & Equipment- review equipment needed
90%, by rated-power Energy Star rated equipment and appliances (2 points)				
credit 2 **Enhanced Commissioning (1 point)**	**1**	60%	**Authority**	Enhanced commx recommended to be included in scope.
Verify and ensure that the tenant space is designed, constructed, and calibrated to operate as intended.				
credit 3 **Energy Use, Measurement & Payment Accountability (2 points possible)**				
Case A: For projects with an area that constitute less than 75% of the total building:				
Install sub-metering equipment to measure and record energy uses within the tenant space (1 point)	**0**	10%	**Mechanical**	Spaces not separated into tenants
Negotiate a lease where energy costs are paid by the tenant and not included in the base rent (1 point)	**0**	10%	**Mechanical**	
Case B: For projects with an area that constitutes more thatn 75% of the total building, install continuous metering equipment for perscribed uses (2 points)	**0**	40%	**Mechanical**	requires continuous metering to be installed into the project- explore with mech
credit 4 **Green Power (1 point possible)**	**1**	60%	**Electrical**	Assumes green power purchase by city
Encourage the development and use of grid-source energy technologies on a net zero pollution basis, 50% of the building's electricity for **two years**.				

Materials & Resources

	Possible Points	confidence 0-40% = 0 41-65% = ? 66-100%= 1	Responsible Party	Project Notes
prereq 1 **Storage & Collection of Recyclables** Facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills. At a minimum, provide recycling for paper, corrugated cardboard, glass, plastics, and metals.	**req'd**	90%	**CRSA**	
credit 1.1 **Tenant Space, Long-Term Commitment (1 point)** Encourage choices that will conserve resources, reduce waste and reduce the environmental impacts of tenancy as they relate to materials, manufacturing and transport Occupant commits to remain in the same location for not less than 10 years.	**1**	70%	**Client**	
credit 1.2-1.3 Building Reuse (1-2 points possible) Extend the life cycle of existing building stock, conserve resources, retain cultural resources, reduce wates and reduec environmental impacts of new buildings.				
1.2 Maintain 40% of Interior Non-Shell, Non-Structural Components	**1**	80%	**Contractor**	Retaining finishes.
1.3 Maintain 60% of Interior Non- Shell, Non-Structural Components	**1**	60%		
credit 2 **Construction Waste Management (1-2 points possible)** Salvage/Recycle- Divert construction, demolition and land clearing debris from landfill disposal. Redirect recyclable material back to the manufacturing process.				
2.1 Divert 50% from Landfill	**1**	70%	**Contractor**	Use of construction waste manager with recycling services.
2.2 Divert 75% from Landfill	**?**	50%		
credit 3 **Resource Reuse (1-3 points possible)** Reuse building materials and products in order to reduce demand for virgin materials and to reduce waste.				
3.1 Use slavaged, refurbished or reused materials for at least 5% of building materials (1 point)	**0**	10%	**Contractor**	Likey cost prohibitive
3.2 Use slavaged, refurbished or reused materials for at least 10% of building materials (1 point)	**0**	10%		
3.3 Use slavaged, refurbished or reused furnitrue and furnishings for 30% of the total furniture and furnishings budget (1 point)	**0**	10%		
credit 4 **Recycled Content (1-2 points possible)**				
4.1 Use a minimum of 10% (post-consumer + 1/2 post-industrial) materials, furniture and furnishings with recyceld content	**1**	60%	**Contractor**	May be available- dependent on new materials needed.
4.2 Use a minimum of 20% (post-consumer + 1/2 post-industrial) materials, furniture and furnishings with recyceld content	**?**	30%		
credit 5 **Local/Regional Materials (1-2 points possible)**				
5.1 Use a minimum of 20% of combined value of construction and Division 12 (Furniture) materials manufactured within a 500mi radius.	**1**	60%	**Contractor**	May be available- dependent on new materials needed.
5.2 of the above 20%, 50% is also extracted locally	**?**	10%		
credit 6 **Rapidly Renewable Materials (1 point possible)** Reduce the use and depletion of finite raw materials, and long-cycled renewable materials by replacing them with rapidly renewable materials. 5% cost of construction materials and Division 12 (Furniture and furnishings) to be made from plants that are harvested within a 10-year or shorter cycle, i.e., bamboo flooring, wool carpet, etc.	**?**	50%	**Contractor**	Possible with linoleum, review amount of product able to be used in project.
credit 7 **Certified Wood (1 point possible)** Encourage environmentally responsible forest management. When using new wood-based products and materials, use a minimum of 50% that are certified with the Forest Stewardship Council (FCS). Division 12 material is included in the credit.	**?**	50%	**Contractor**	Not a great deal of wood will be used, some blocking, cabinetry and doors.

Indoor Environmental Quality

	Possible Points	confidence 0-40% = 0 41-65% = ? 66-100%= 1	Responsible Party	Project Notes
prereq 1 **Minimum IAQ Performance** Establish minimum indoor air quality (IAQ) performance to prevent the development of indoor air quality problems in buildings, maintaining the health and well being of the occupants. Meet ASHRAE 62-2004	**req'd**	60%	**Mechanical**	Needs review if available with existing system.
prereq 2 **Environmental Tobacco Smoke (ETS) Control** Prevent exposure of bldg occupants and systems to Environmental Tobacco Smoke. (don't put outside smoking areas near windows, intakes or doors)	**req'd**	90%	**CRSA**	Utah Clean Air Act
credit 1 **Carbon Dioxide Monitoring (1 point possible)** Provide capacity for indoor air quality monitoring to sustain long-term occupant health and comfort.	**0**	10%	**Mechanical**	Requires addition of monitors
credit 2 **Increase Ventilation (1 point possible)** Provide for the effective delivery and mixing of fresh air to support the health, safety, and comfort of building occupants. Increase breathing zone outdoor air ventilation rates to all occupied spaces by at least 30% abover minimum rates required by AHRAE 62.1-2004	**?**	50%	**Mechanical**	Needs review if available with systems- likely difficult without affecting energy savings.

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credit 3 **Construction IAQ Management Plan (1-2 points possible)**				
3.1. During Construction Develop and implement an Indoor Air Quality (IAQ) Management Plan. MERV 8 filters, protect stored on-site and installed absorptive materials form moistrue dammage, etc.	**1**	60%	**Contractor**	
3.2. Before Occupancy **Option A** Flush- Out Proceedure **Option B** IAQ test Procedure	**1**	60%		
credit 4 **Low-Emitting Materials (1-5 points possible)**				
4.1 Adhesives & sealers must meet or exceed the VOC limits	**1**	60%	**Contractor**	
4.2 Meet or exceed VOC limits by Green Seal and SMAQMD for paint and coatings.	**1**	60%	**Contractor**	
4.3 Carpet must meet or exceed Carpet Institute Green Label Plus Indoor Air Quality Test Program. Pad must meet Greel Label and adhesive must meet EQ 4.1 Standards.	**1**	60%	**Contractor**	
4.4 Composite wood and agrifiber products must contain **no** added **urea-formaldehyde** resins.	**1**	60%	**Contractor**	
4.5 Systems furniture and seating that has been manufactured, refurbished or refinished within one year prior to occupancy must meet one of the following: Option A Greenguard Indoor Air Quality Certified Option B ETV vocs and aldehydes limits	**0**	10%	**Contractor**	No systems furniture planned in scope.
credit 5 **Indoor Chemical & Pollutant Source Control (1 point possible)** Avoid exposure of building occupants to potentially hazardous chemicals that adversely impact air quality. Issue 1: Permanent entryway systems at high-volume entries. Issue 2: janitorial closets, bathrooms, copy rooms & chemical mixing rooms all vented to exhaust ducts and have deck to deck partitions. Issue 3: Chemical mixing drains are plumbed for appropriate disposal of waste. Issue 4: Use MERV 13 or better filters	**1**	70%	**CRSA**	New system must be able to handle MERV 13 filters. New entrance mats planned to be recessed. Chemical use rooms (restrooms, janitors closets, etc) to have hard gyp ceiling.
credit 6 **Controllability of Systems (1-2 points possible)** Provide a high level of individual occupant control of thermal, ventilation, and lighting systems to support optimum health, productivity, and comfort conditions.				
6.1 Lighting Provide lighting controls for at least 90% of occupants AND all shared multi-occupant spaces where transient groups must share lighting controls	**?**	50%	**Electrial/ Mechanical**	System to be evaluated- individual workstations to be the biggest challenge and require task lighting.
6.2 Temperature & Ventilation Provide thermal and ventilation controls for: At least 50% of the space occupants AND all shared-multi-occupant spaces- operable windows may be used in lieu of individual controls for occupants near windows	**1**	70%		System to be evaluated- likely possible with a new system, more difficult with a Retrofit system.
credit 7 **Thermal Comfort (1-2 points possible)**				
7.1. Compliance Comply with ASHRAE 55-2004, Thermal Comfort Conditions for Human Occupancy	**1**	60%	**Mechanical**	
7.2. Monitoring (in addition to EQ 7.1) Provide a permanent monitoring system and process for corrective action to ensure performance as determined by EQ 7.1	**?**	30%		To confirm with mech.
credit 8 **Daylight & Views (1-2 points possible)** Provide a connection between indoor spaces and outdoor environments through the introduction of sunlight and views into the occupied areas of the building.				
8.1 Achieve a minimum Daylight factor of 2% in 75% of all spaces occupied OR achieve at least 25 footcandles using a computer simulation model AND provide glare control devices	**?**	50%	**Electrical**	Need to verify with building plans and glazing types. Will have no chance of these points with the addition of solar film mentioned in ESCO report would make these points.
8.2 Achieve a minimum Daylight factor of 2% in 90% of all spaces occupied OR achieve at least 25 footcandles using a computer simulation model AND provide glare control devices	**0**	30%		
8.3 Give access to views from 90% of all occupied spaces	**1**	60%	**CRSA**	

Innovation & Design Process

	Possible Points	confidence 0-40% = 0 41-65% = ? 66-100%= 1	Responsible Party	Project Notes
credit 1 **Innovation in Design (1-4 points possible)** Exceptional performance above requirements set by the LEED Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by LEED.				These credits are MORE difficult to achieve than the others, and may require more documentation.
1.1. Education	**1**	60%	**Owner**	
1.2. On-Site Renewable Energy	**?**	50%	**Owner/Elec**	PV Panels listed as an alternate. Explore as an innovation point if not available under SS.
1.3. Exceptional Performance EA 6.0	**?**	50%	**Owner**	City to purchase additional green power
1.4.	**0**	10%		
credit 2 **LEED Accredited Professional (1 point possible)** To support and encourage the design integration required by a LEED Green Building project and to streamline the application and certification process.	**1**	100%	**Architect**	

total possible points 31 + 9 other possibles

21-26 Certified 27-31 Silver 32-41 Gold 42-57 Platinum

Appendix E:
Matching Funds

Matching Funds

The Matching Funds Agreement between Salt Lake City Corporation and The Leonardo required The Leonardo to raise $10 million funds in contributions before the $10.2 million bonds could be issued. On April 30, 2006, $10,466,465 of matching funds was verified by the City. Included in this amount were $3.4 million of conditional pledges. The conditional pledges were collectible only if additional funds were not raised by the Leonardo.

In 2008, the financial records of The Leonardo were examined by outside auditors and the matching funds were again reviewed. The conditional pledges were no longer valid as additional funds had been raised and the time limits on the pledges had expired. In October of 2008 the City verified the following amounts.

Remaining original match verified by outside auditors	$ 7,066,465
FEMA Grant	1,026,328
Blue Sky Grant	125,000
Salt Lake County	360,000
Rockwell Collins	260,000
Earned Revenues May 06-Sept 08	1,844,369
Total eligible matching funds	$ 10,681,162

The earned revenues include a $1 million pledge from Tanner Charitable Trust and several grants from the Utah State government totaling $345,000. The FEMA and Blue Sky grants were received in partnership with Salt Lake City and it was determined that these funds were eligible to be counted as part of the required matching funds. These additional funds replace the conditional pledges and satisfy the requirement for the matching $10 million in the original agreement.

Appendix F:
Leonardo Interim Report
January 26, 2009

Leonardo
Interim Report
January 26, 2009

Introduction

The Leonardo is a proposed science center slated to occupy the former Salt Lake City Library building in Library Square. On November 4, 2003, voters approved a $10.2 million dollar bond to subsidize the capital costs of building renovations. Before releasing these bond funds the Salt Lake City Corporation is undertaking research to determine the long term sustainability of this new informal science learning facility.

Raylene Decatur, of Decatur and Company LLC, was retained by the City in November of 2008 to review the current status of this project, and provide observations on the current status of this project and project viability.

The City has asked Decatur and Company to review the Leonardo's business plan *A New Way Forward,* dated December, 5, 2008, and adopted and ratified by its Board of Directors on Dec. 22, 2008. The assignment is to review this plan within the context of prior plans and documents, as well as from the perspective of future performance of this organization. Specifically, the City is interested in gaining a comprehensive understanding of the following aspects of the project:

- Mission, Vision and Strategic Direction
- Program and exhibition plan
- Validating the financial projections in the business plan including:
    - Projected attendance results based on the new Program Plan
    - Capital and operating funding targets.
- Understanding the capacity of the Board and staff to execute this plan.
- Evaluating the mix of revenue sources required to sustain this Institution
- Identifying the areas of greatest risk within the business plan.

Methodology

As part of this assignment, to date, the following tasks were completed:

- Interviewed:
    - Seven member of the Leonardo Board,
    - Peter Giles, Executive Director, Leonardo
    - Principals at Gyroscope
    - Three current donors- individual/corporate and two foundations
- Document Review
- Reviewed the business plan

My work to date resulted in the following outcomes:

Mission, Vision, and Strategic Direction of the Leonardo

The results of interviews, research on the market, review of the documentation, and the proposed program plan represent a consistent, perceived need for an informal science facility in Salt Lake City, supporting science education in Utah and the region. The intended audiences for this facility are adult learners and families with children 10 or older. The state's economic development strategy is based in large part on technology, and dependant on a science and math literate workforce. To achieve this goal there is a desire to focus on learning beyond the classroom and showcase local industries. Individuals interviewed were very concrete when discussing the purpose of the organization, audiences that would be served and they consistently presented a clear picture of the mission-vision for this institution. There does not appear to be a duplication of effort or redundancy in the Leonardo's plan with other organizations currently operating in Utah.

Recent success of *Body Worlds* has added an additional facet to these conversations, highlighting the Leonardo's opportunity to "bring the world to Salt Lake City." Respondents recognize that *Body Worlds* is a phenomenon that is unlikely to be replicated. However, a major temporary program or exhibition every 18 – 32 months would reinforce the image of Utah as a state on the move, offering the cultural and educational amenities of a large and vital metropolitan area.

Programs

The most transformational change since the 2007 ERA report is the new approach to the Leonardo Program Plan. The organizational capacity to mount the currently outlined program and achieve the desired results has increased ten-fold when compared with the experimental, open-ended programs in the prior plan.

Business Plan

Revenue and expense profiles appear to be well thought out and well within national benchmarks for organizations of this type. Attendance projections are conservative and are validated based on reasonable national comparables provided by Gyroscope, Peter Giles, or ERA.

Attendance, in general, is staying strong in science museums and science centers, and historically trends toward counter-cyclical during economic downturns. National trends toward younger audiences may argue for a higher percentage of children in the attendance model. As important as the number of attendees is the per capita income from attendance. During the first year of operation, the Leonardo Board and staff will need to be vigilant in understanding how actual attendance results vary from the plan, and how these variations impact the revenue generated by visitors.

Program income growth and greater leveraging of the existing *Leonardo on Wheels* program may be either retail opportunities or may contribute to securing local or state government support.

Membership projections are extremely conservative, and this is one area that could be targeted as a significant opportunity to both grow income and cultivate deeper relationships with statewide stakeholders.

Capital and Operating Fundraising

Projecting fundraising is always challenging, and for a start-up organization working in the current economic environment, this is especially true. The most challenging and high risk aspect of this business plan is the fundraising program. The fundraising plan for capital and operating funds from individuals, foundations and corporations is conservative given the experience of science centers nationally and informal science education organizations in the Intermountain West. The "public support" or "government" funding assumptions are aggressive. Based on conversations with Board members these assumptions are based on a menu of funding approaches ranging from fees for programs in public schools to line-item appropriations.

Diversifying revenues sources at this juncture in the organizations history is critical, and this is especially true in fundraising. Energy must be brought to all types of potential donors, and systems must be in place to assure these donor relationships are cultivated in a consistent and thoughtful manner.

A successful short- and long-term fundraising program requires the Leonardo Board, staff and stakeholders execute a high profile communications plan in a consistent, tenacious and effective manner. The enthusiasm of key stakeholders, including the Governor of Utah, Mayor of Salt Lake City, corporate, education and tourism leadership needs to perpetuate momentum and increase the visibly of this project. The Leonard Board and staff will need to create systems that assure consistent messaging and building the organization's brand regionally. Based on the recent success of *Body Worlds* this is the perfect time to implement this phase of the organization's communications plan.

Governance and Management

The single most important factor to the success of a new nonprofit organization is the quality of the Board and staff, and their capacity to achieve the results necessary for developing the organization beyond the start-up stage of its lifecycle.

Next to the Program Plan, this is the area where the most positive steps have been taken over the last six months. Peter Giles has the capacity to harness the Board and staff's energy and passion to create programs and activities that will engage targeted audiences. He has successfully opened other science centers, and has work for and with nonprofit Boards, previously.

Also, the Board has made great strides in the recent months. The Board is already developing the structure necessary for a "growth" rather than "start-up" organization. Current Board members can articulate issues that represent organizational risk, their decision making processes, and are informed and ready to make timely decisions. Efforts are currently underway identifying and cultivating new members who will provide the next generation of Board leadership. Building Board structures, including the creation of committees, terms of office and a consistent recruitment process are underway. For an organization at this stage of development, great progress is being made on moving from a "staff driven model" to a Board /staff ownership of organizational outcomes

Summary - Outcomes and Next Steps

The Leonardo has weathered a long and challenging path as a start-up organization. Based on the information I have today, the organization is poised for success at a level unimaginable twelve months ago. The new management, renewed Board, program plan and business plan are all key elements bringing confidence to future outcomes for this organization. The fundraising plan is ambitious, but ultimately can be achieved, if there is widespread energy and enthusiasm for serving in the people of Utah in the manner described by the Leonardo's mission.

Recommendation: Issue and Sell the General Obligation Bonds and enter into a lease agreement with the Leonardo.

Material presented herein is gathered from what are represented as reliable sources. Content is not intended to provide legal, accounting or tax advice.

Appendix G:
BODY WORLDS
Community Impacts

The Leonardo Hosts BODY WORLDS: Community Impacts

Financial Investment

As host and operator of BODY WORLDS, the most successful traveling exhibition in history, The Leonardo invested approximately $1.8 million in the local community. This includes monies paid to contractors, employees (a total of 140 paid staff) and consultants, local vendors, and other organizations that worked on the exhibition. In addition to the $1.7 million invested directly by The Leonardo, BODY WORLDS invested an additional $450,000 locally in paid advertising, promotions, design, printing, and other marketing materials and activities.

Volunteers

The Leonardo recruited, trained and utilized over 450 community members as volunteers, including students, medical and health professionals, and laypeople. These volunteers donated 8,000+ hours of their time over the four-month period.

Media Exposure

The Leonardo, Library Square and Salt Lake City received extensive exposure via local and regional media reports about the exhibition, including approximately 75 print and 30 television stories.

Visitors: From Across the State and Nation

Tickets Sold: The Leonardo sold over 290,000 tickets to the BODY WORLDS exhibition. While most tickets were purchased by Utah residents, visitors from surrounding states like Idaho and Wyoming, also bought a significant number of tickets. In addition, The Leonardo sold BODY WORLDS tickets to visitors from every single state in the nation (see included map, "BodyWorlds3visitors.pdf," which represents the visitors through Jan. 7, 2009.[1])

Incoming Calls: The Leonardo opened its doors to visitors for the BODY WORLDS exhibition on Sept. 19, 2008. Although the museum does not have call center data prior to Nov. 4, an examination of incoming call traffic between Nov. 4 and Jan. 11 provides a snapshot of where calls originated.

The chart below shows about 17 percent of incoming calls originating from outside the Wasatch Front's 801 area code. Almost nine percent came from the 435 area code, and about eight percent came from outside Utah (see detailed graph below).

Type	Number	%
Calls originating in 801	9,122	83.2
435	980	8.9
Out-of-state (not 801/435)	865	7.9
Total	10,967	100

The Leonardo's call center manager spoke personally with many callers who live out of state and traveled to Utah to see BODY WORLDS because they did not expect it to show in show in Idaho, Montana, Wyoming or northern Nevada.

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[1] *The Leonardo only collected zip code information from visitors who purchased tickets with credit card via the call center or online. As a result, the map does not fully reflect the total number of tickets purchased in each state.*

A Hive of Activity: Library Square and Surround Area

Restaurants: Les Madeleines, Thai Lotus and Cannella's have all written letters (attached) illustrating the positive impact The Leonardo had on their business during the four-month exhibition run. Despite the down economy, these local merchants reported an increase of up to 30 percent in business activity between September and January.

Library: The Salt Lake Public Library also saw an increase in the number of visitors. Beth Elder, the library director, said that the added foot traffic on Library Plaza has been a boon to the area. "The thing that I've been most excited about is the activation of Library Square and the plaza — now you can see people having a reason to walk across the plaza. There's definitely been more people walking around, milling around, meeting people in the whole Library Square area."

The library also saw significant increases in both the number of items checked out and the number of new cards issued. Some of the increases can be attributed to the depressed economy, but both Elder and Matt McClain, who provided the library's statistics to The Leonardo, say that at least a portion of the increases are attributable to additional traffic from the exhibition.

Items checked out at the Main Library:

Month	2007	2008	% Change
August	155,466	160,991	3.6
September	152,908	168,216	10
October	161,523	173,362	7.3
November	155,830	164,256	5.4
December	148,640	163,945	10.3

New Cards Issued at the Main Library:

Month	2007	2008	% Change
August	2116	2107	-.4
September	1800	2056	14.2
October	1955	2173	11.2
November	1806	1873	3.7
December	1462	1678	14.8

Library Parking: Traffic Increases. The underground parking garage in Library Square saw a dramatic increase in traffic during BODY WORLDS:

Month	2007	2008	% Change
August	12,323	9,230	-25.1
September	11,573	12,744	10.1
October	13,149	15,824	20.3
November	10,064	11,219	11.5
December	7,510	9,915	32.0

Library Parking: Revenue Increases[2]

Month	2007	2008	% Change
August	-$6,007.59	-$4,509.16	24.9
September	-$2,765.71	$4,436.91	260.4
October	$341.45	$11,117.84	3156.1
November	-$598.63	$6,526.77	1190.3
December	-$4,170.86	n/a	n/a

Street Meter Parking: A simple visual survey of the street parking situation around Library Square between Sept. 19 and Jan. 11 indicated a dramatic increase in usage. While meters were not running during part of this time period due to the free holiday parking program offered by Salt Lake City, The Leonardo anticipates that city data will show a measurable increase in both meter fees and ticket revenues during the exhibition's run.[3]

Events and Programs

The Leonardo hosted over 100 private and public events that exposed the museum and city to over 13,000 visitors.

Private Functions attracted high-level professionals from around the region and world in the fields of medicine, technology, science, publishing and education. These events also involved additional investment in the community via outside vendors like caterers, florists, musicians, and rental companies. Highlights include a the VIP preview event, which attracted almost 1,000 business, political and community leaders, and a University Health Care event that brought over 5,000 visitors over two days.

Public Events: The Leonardo partnered with several art, science and health groups to offer dozens of public events, ranging from hands-on science, story recording, and dance workshops, to films, public forums, and play readings. The Leonardo was also a First Night venue on New Year's Eve.

Schools

More than 26,000 students ranging from kindergarteners to high school seniors came to The Leonardo on field trips. Many schools from outside the Wasatch Front, and 27 schools from other states, including California, Wyoming, Idaho and Colorado, brought students on fieldtrips to The Leonardo. Several stayed overnight in Salt Lake City, shopped in local stores, ate in restaurants and stayed in hotels.

Examples and Quotes

A group of students from Jackson, Wyo., traveled to Salt Lake City the day before their Body Worlds visit. They all shopped at Gateway, stayed at a downtown hotel, and then viewed the exhibit before returning home. Monte Vista Christian School from Watsonville, Cal., flew into Salt Lake City specifically to see BODY WORLDS. They spent the night in downtown hotels and then

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[2] *Between fall 2007 and fall 2008, the rates at the underground lot increased. Naturally, this led to an increase in revenue as well. However, the change in the number of cars was substantial enough to also be responsible for some of the increase in revenue.*

[3] *The Leonardo does not have access to Salt Lake City parking data.*

returned to California after seeing the exhibit.

One group of 75 students from Logan High School came to Salt Lake the night before their visit to the exhibition, spent the night in downtown hotels, saw "Monet to Picasso" at the Utah Museum of Fine Arts the next morning, and then visited nd BODY WORLDS that afternoon.

Brianna Rounds, who teaches a Dental Assisting course at Tooele and Grantsville High Schools, toured BODY WORLDS with a group of students on Dec. 17. "Seeing this exhibit gives us a better understanding of the bodies that we have and the need to take care of ourselves," said Rounds. "I strongly feel that everyone should take the opportunity to see it."

Over 200 students from Delta High School visited The Leonardo during the exhibition. Karen Roper, a math teacher and advisor for the honor society, chose the exhibition as her group's annual fieldtrip. "You can teach them out of a textbook, but nothing compares to seeing something in real life. I think that the students will have more respect for their bodies after seeing this exhibit," said Roper. "There are things that we are told not to do, but seeing in real life the effects that unhealthy lifestyle choices have on the body will make a big impact."

Students from Burlington High School in Idaho also visited the exhibition. "I left feeling a deeper appreciation and understanding of the miracle of life," said Science Teacher, Katie Berry. "There are so many aspects of the body that we still have to understand, but one thing we continue to realize from these new discoveries is that life is precious."

What Others Are Saying ...

The BODY WORLDS exhibitions are fortunate to partner with top museums and institutions internationally. We were honored to be hosted by such a professional museum with a staff and venue among the finest." –*Dr.* Angelina Whalley, creative and conceptual designer of BODY WORLDS *and director of the Institute for Plastination in Heidelberg, Germany.*

As people throughout the region came to The Leonardo to see BODY WORLDS, they helped create a more vibrant capital city with positive effects extending beyond the boundaries of Library Square. The exhibition's success showed that the larger community is ready and willing to support world-class cultural opportunities, like a science and art center. These past four months, The Leonardo has definitely helped the Downtown Alliance accomplish our goal of creating a more dynamic downtown that is the center of commerce and culture for the Intermountain West. –*Jason Mathis, Executive Director, Downtown Alliance*

SCOTT BECK QUOTE – in approval process

NATALIE GOCHNOUR QUOTE – to come.

PATISSERIE

LES MADELEINES

CAFE

216 E. 500 S.
Salt Lake City, UT 84111
www.les-madeleines.com

January 7, 2009

Alexandra Hesse
The Leonardo
209. E 500 S.
Salt Lake City, UT 84111

Dear Alexandra,

I wanted to let you know how grateful I am that The Leonardo has hosted Body Worlds. As a local business owner who is heavily invested in the health and vibrancy of downtown Salt Lake City, I want to let you know about the positive impact The Leonardo has had on both our business and visibility during your exhibit.

Since Body Worlds opened in September, I have seen a 20 percent increase in the number of patrons coming through my doors at 216 E. 500 South. Some of that increase may be due to a Food Network appearance that month as well, but many of these new patrons specifically mention Body Worlds when my staff and I talk to them about what brought them to our store. In a season when many restaurant owners saw their revenue and visitors drop drastically from the depressed economy, my revenue and visitor numbers remained very strong.

Patrons regularly commented that they rarely visited Salt Lake City, but that they would be more likely to come back now that they knew about The Leonardo, Body Worlds and Les Madeleines. One particular visitor from Layton called in advance, told us that she would be coming to Salt Lake to attend Body Worlds — and that she rarely visited the city — and requested that we set aside a box of pastries for her! Anecdotes such as these and countless others have made our partnership with The Leonardo fruitful.

I'm very excited to see The Leonardo successfully operate on Library Square — I believe that a healthy community gathering place such as the one across the street from my store can only benefit the city, its residents, its businesses and its reputation. Thank you for your dedication and hard work in making downtown Salt Lake City a better, more interesting place!

Best Wishes,

Romina Rasmussen

Jan. 8, 2009

Alexandra Hesse
The Leonardo
209 E. 500 South
Salt Lake City, UT 84111

Dear Alexandra,

On behalf of Thai Lotus, I would like to thank you and The Leonardo for hosting Body Worlds this fall. I have greatly enjoyed being across the street from this impressive cultural event.

Before Body Worlds opened, I would often observe the homeless population of Salt Lake City using The Leonardo steps and porches to lounge and sleep. I even once saw a rooster strutting around the building! Since the museum opened, however, I have happily observed new visitors, including families, couples and groups of people coming in and out of the building. These people are downtown learning about things, not going to a suburban strip mall — they're coming downtown, to library square, to be enlightened.

I believe that Library Square is the most beautiful block in the city, and that the public city library is the most beautiful building. For the past several months The Leonardo has helped Library Square fill its potential as a civic center. As an added bonus to me, I have seen our business at Thai Lotus increase by 10 to 15 percent, at a conservative estimate. The Leonardo and Body Worlds have truly been a boon to business and the city at large.

Thank you for your work and efforts to make this all possible.

Sincerely,

Leon Antczak
Owner, Thai Lotus

Credit Card Purchases To Body Worlds
By State

January 2009

Prepared For
The Leonardo

Washington
Oregon
California
Idaho
Nevada
Montana
Wyoming
Utah
Arizona
Colorado
New Mexico
North Dakota
South Dakota
Nebraska
Kansas
Oklahoma
Texas
Minnesota
Iowa
Missouri
Arkansas
Louisiana
Wisconsin
Illinois
Michigan
Indiana
Ohio
Kentucky
Tennessee
Mississippi
Alabama
Georgia
Florida
South Carolina
North Carolina
Virginia
West Virginia
Pennsylvania
New York
Maryland
Delaware
New Jersey
Connecticut
Rhode Island
Massachusetts
Vermont
New Hampshire
Maine
Alaska
Hawaii

Body Worlds 3
Credit Card Purchases

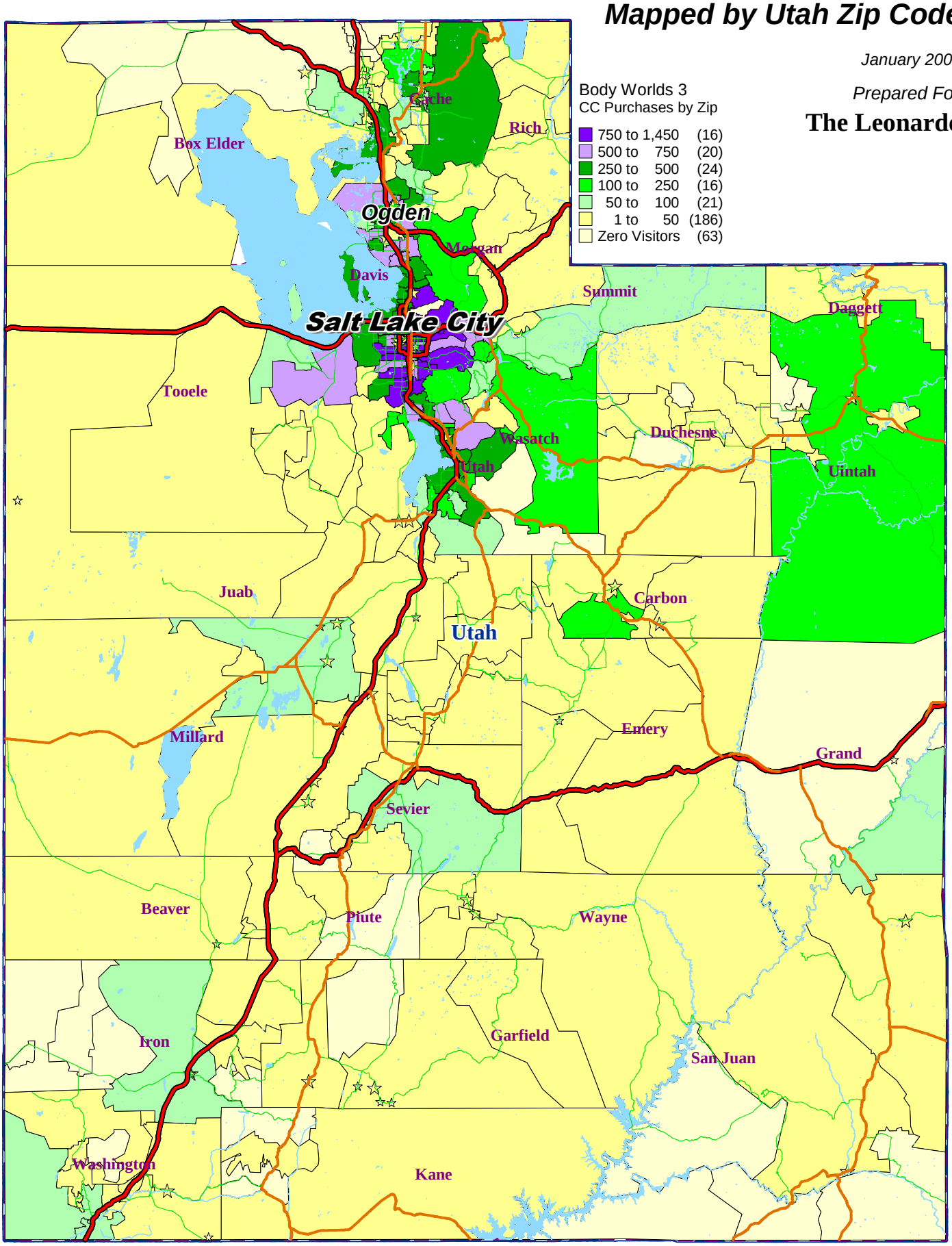
1,000 to	78,300	(1)
300 to	1,000	(3)
100 to	300	(4)
50 to	100	(4)
10 to	50	(19)
1 to	10	(20)

Credit Card Purchases to Body Worlds
Mapped by Utah Zip Code

January 2009

Prepared For

The Leonardo



Appendix H:
Leonardo Construction Timeline

The Leonardo Project: This Time-Line is critical to the success of The Leonardo!