

Strategic Plan Extension

Goal I: Organization

Create an organizational structure that builds a fiscally healthy business and engaged employee culture that

- leverages brand and identity
- maximizes the resources of the Drexel/Academy partnership and emphasizes being part of Drexel's "One University" concept
- achieves the University and Academy's shared goal of "break-even or better" financial performance for the Academy in fiscal 2015

Strategic Objectives:

- A.** *Develop an institutional culture and salary structure that creates merit-based performance, ensures accountability, and builds a strong team.*
1. **Completed:** Finalize organizational structure and reporting relationships
 2. **Completed:** Develop accountability and performance expectations
 3. **Completed:** Align performance and compensation structure
- B.** *Create a plan that analyzes the Academy's services and activities and maximizes the use of these resources.*
1. **Completed:** Perform program reviews across the Academy
 2. **Ongoing:** Develop assessment criteria for allocation of Academy resources toward programs and services
 3. **Ongoing:** Develop a plan that focuses on investing in programs and services with high financial and cultural ROI
- C.** *Achieve financial viability by producing break-even or better financial results for fiscal 2015. **Financial goal for 2015 achieved***
1. **In-process:** Develop an enrollment and retention plan with the University that assures the financial success of BEES
 2. **In-process:** Develop a concept plan for vision implementation, including visitor experiences, programs, membership development, and marketing
 3. **On hold:** Develop implementation strategies from the new facilities concept plan
 4. **In-process:** Develop a long-term operating plan for the Academy
- D.** *Develop an Academy Culture that fits within Drexel's One University concept, reflects high employee engagement and satisfaction, and encourages a strong sense of*

community.

1. **Ongoing:** Develop an internal communications program that displays timeliness, accuracy, and transparency
2. **Ongoing:** Create a set of tactics that collectively work to deliver a more unified Academy across all functions
3. **Ongoing:** Embrace Diversity as a shared value and create tools for encouraging inclusion in recruitment, programming, and outreach, among other activities

E. Ongoing: Create a plan to strengthen the depth and breadth of the Academy's board through strategic recruitment and training in best governance practices.

Key Accomplishments:

- Achieved financial goal for affiliation of “breakeven or better” by June 30, 2015.
- Implemented salary and benefit equalization for Academy staff starting January 1, 2016.
- Reduced endowments draw from 6.5% to 6.0% in FY17.
- Established President's Strategic Initiative Fund with \$5 million endowment gift and another \$1 million gift paid over five years.
- Secured \$2.5 million endowment for Center for Environmental Policy.
- Raised a total of \$10.3 million in new endowment gifts since the affiliation.
- Achieved effective Governance Committee and engaged Board.

2017–2018:

- Employee Satisfaction: Develop an annual survey that measures the key drivers to employee satisfaction
- Staffing and staff development: Create and implement a plan that includes onboarding and ongoing professional development tracks
- Board of Trustees: Focus ANS Board on inclusion and trustee succession
- Financial Viability: Near-term target for the draw from the endowment is 5.5%
- Revenue: Focus on identifying and securing new revenue streams
- Museum: Improve museum operating model and performance

Questions:

- *Are there opportunities to enhance revenue that we have not explored and should?*
- *For Board and staff, are there key elements that should be added to onboarding and professional development?*

Goal II: Assets

Unlock and leverage the value of the Academy

The Assets goal is divided into two sets of objectives, related to real estate assets, including use of facilities, and collections assets.

1. Real Estate

Strategic Objectives

- A. *Identify the core Academy functions that can be relocated from, retained, and/or enhanced at our 1900 Benjamin Franklin Parkway location while further leveraging the visitor value of the Parkway campus.*
1. **In-process:** Develop planning criteria for evaluating Academy core functions currently located at the 1900 Parkway address that do not directly contribute to the visitor or programmatic value inherent in the site (Key drivers include: Science Lives Here, BEES space on campus, resolution of wet storage)
 2. **Complete:** Explore options for leveraging and housing the use and value of the Academy's "back-office" functions
- B. *Leverage our investment in the 1900 Parkway building to showcase its architectural beauty while creating visitor/retail amenities, educational facilities, and compelling public exhibition spaces that promote the Academy's scientific and cultural assets.*
1. **On-hold:** Assess potential options for enhancing the Academy's current physical assets, including its sidewalks/plaza, location, and retail
 2. **On-hold:** Build retail amenities that connect the Academy with both the Parkway and 19th Street to increase traffic flowing to the museum, resulting in increased visitation to the Academy's programs, exhibits, and activities
 3. **On-going:** Revisit the 2009 facility Master Plan, which has value, and as necessary, engage staff and planners to reinvent and expand the Academy visitor experience
- C. *Leverage the value of a specialized Parkway campus to continue growing and developing Drexel-branded campus districts that are mixed use in character.*
1. **On hold:** Engage partners in identifying potential revenue-generating options, including the Academy's hidden assets (location, air-rights, frontage, etc.)
 2. **Complete (short-term)/In-process (long-term):** Develop a space plan to address the short- and long-term classroom and lab space needs for the BEES coursework

2. Collections

Collections at the Academy are usually thought of as the biological collections and Library and Archives collections. These and other collections resources are embodied in a variety of formats, such as biological specimens, geological specimens, paper (books, journals, reports, catalogs, labels), art/artifacts, digital, film, and textiles. Digital collections, in particular, offer new opportunities and challenges.

Positioning Statement

Optimize stewardship, growth, and availability of the Academy's collections in all their forms so that these unique resources can promote discovery and become ever more central to research, teaching, and exhibition.

Strategic Objectives

A. *Address stewardship issues of ANS collections. Explore the ramifications of the Drexel University affiliation for collections assets, including developing plans for increased educational use of collections.*

1. **Complete:** Determine the need and protocols for teaching collections for students from the Department of Biodiversity, Earth & Environmental Science (BEES)
2. **Complete (short-term)/In-process (long-term):** Create a plan to determine how best to utilize the ANS exhibits collection as the core of a centralized teaching collection at the Academy, including management/staffing needs, renovation needs, and current education collections. **New:** Add as online resource for faculty and staff queries
3. **Complete (short-term)/In-process (long-term):** Determine the Library's role in providing traditional and online resources for BEES and other students in coordination with Drexel University Libraries (DUL), and address the implications for access to licensed electronic resources negotiated by ANS and DUL
4. **Complete (short-term)/In-process (long-term):** Create a plan that addresses the infrastructural needs for BEES students and faculty, as well as other academic areas, when working with collections assets, including health and safety concerns
5. **Ongoing:** Develop a plan to address the additional staffing needs (especially in Library and Archives) for supporting the significant increase in requests from a variety of Drexel constituencies.
6. **Ongoing:** Create a plan to address any security concerns; mitigate vulnerabilities and risks to collections
7. **Complete:** Consider the role of the Live Animal collection

B. *Develop a plan for the capture, management, and preservation of digital data.*

1. **Complete (short-term)/In-process (long-term):** Explore the emerging role of digital data, especially images, in research and education
2. **Complete:** Identify biological and archival collections that have been digitized. Prioritize those requiring additional processing for access, as well as additional collections for which digital access will be valuable to research, teaching, or revenue generation. Develop plan to curate digital surrogates to the ANS collections of highest priority
3. **Ongoing:** Explore data integration projects in collaboration with Digital@Drexel initiative(s). Determine how cross-content queries of ANS collections could work

4. **Complete:** Establish an Office of Image Resources and Intellectual Property Rights to promote revenue-generation from digital collections assets
5. **In-process:** Identify the funding possibilities for "big-data" projects, including exploration of the planning underway at Drexel to establish a university-wide infrastructure for curating and preserving digital assets
6. **In-process:** Develop a plan to support the staffing and infrastructure needs of digital data
7. **In process:** Develop work plan that addresses secondary priorities for gathering digital data

C. *Explore revenue-generating potential of collections.*

1. **Complete:** Establish an Office of Image Resources and Intellectual Property Rights (IPR) at the Academy
2. **Complete:** Create an inventory of feasible revenue generators and prioritize these, including exploring the potential for additional grant support for collections
3. **In process:** Develop work plan to address secondary priorities related to Scientific Publications

D. *Determine location or co-location of collections. Consider the best and highest use of the Parkway location while maintaining, using, promoting, and exhibiting collections.*

1. **In-process:** Evaluate best location of specimens, archives, and reference materials using criteria such as those presented below. Develop a plan of action that can adapt to issues from strategic planning that will impact space usage and other opportunities
2. **In-process:** Assess importance of proximity to researchers, students, and philanthropic prospects
3. **Complete:** Determine rate of growth of collections with respect to storage needs
4. **On hold:** Estimate costs and efficiency of off-site shelving/storage. Consider collaboration or outsourcing management with DUL
5. **In-process:** Assess alternative storage options, including improvements in environmental conditions, access, and associated requirements for collections care and delivery
6. **Ongoing:** Maximize the opportunities of research, teaching, and exhibition
7. **In-process:** Consider that the relocation of collections includes relocation of collection managers and support staff, and that with each relocation a link to the museum programming/events/cultivation would be diminished
8. **On hold:** Review off-site collections storage initiatives at other institutions
9. **Ongoing:** Determine how the space management in current building(s) can be improved

Key Accomplishments:

- Completed consolidation of administrative functions: human resources, payroll, benefits, legal, risk management, procurement, accounting, facilities management, information resources, and technology.
- Progressing with plans for state-of-the art facilities and experiences in Library Research Center and New Gallery.
- Built two labs and one classroom, which have been embraced by BEES students.
- Established teaching collections and addressed Drexel environmental health and safety issues.
- Evaluated digitization efforts; progressing with new projects.
- Reap continued success with collection care and digitization grants.

2017–2018:

- Evaluate current and potential future locations for collections
- Determine an “operations plan” for library and archives services in preparation for and during renovations for the new Library Research Center
- Continue to explore next steps in digitization efforts that will have an impact of research, teaching and outreach

Questions:

- Would potential synergies between collections and programming be compromised if collections are separated from programming/outreach?
- Who are potential partners who could help us generate revenue from the digital collections?
- Are there other ways to leverage the value of our real estate and collections that should be explored?

<i>Goal III: The Public Experience</i>

Through engaging, innovative, and personal connections, ignite the passion of our internal and external audiences, encouraging them to learn, explore, and engage in the wonder of the natural and environmental sciences.

Strategic Objectives:

A. *Define our audiences and assess current experiences.*

1. **Ongoing:** Conduct comprehensive studies of current and desired audiences
2. **Ongoing:** Assess current services and activities
3. **In-Process/Ongoing:** Identify new or expanded exhibit and program areas for specific audiences, such as younger children, college students, families, and older adults

B. *Create a sense of wonder about the workings of the natural world through the creation of engaging, authentic, and memorable experiences that allow visitors to connect with one another.*

1. **Ongoing:** Develop services and experiences that balance mission and margin

- to provide engaging and memorable experiences
- 2. **Ongoing:** Expand gallery experiences to increase visit duration and promote repeat visitation
- 3. **In-process:** Identify and eliminate barriers to engagement and accessibility
- 4. **Ongoing:** “Intensify and Improve the Student Experience” (strategic initiative of Drexel’s plan) by creating attractive social programs that enhance Drexel student involvement with the Academy
- 5. **Ongoing:** Build a vibrant and extensive social media component into all programs

C. Create a facility concept plan that leverages the learning, experiences, and opportunities of the new Academy experience.

- 1. **Ongoing:** Review current Master Plan in light of affiliation with Drexel University and opportunities it offers
- 2. **Complete:** Research cutting-edge museums and develop a matrix of the results
- 3. **Ongoing:** Use data from audience assessment to develop a plan to prototype new visitor experiences

D. Based on the efforts of (C) above, develop a case for support to fund the reimagined experience.

- 1. **In-process:** Test the case with internal and external stakeholders for feasibility
- 2. **In-Process:** Begin development of capital campaign to create the Academy’s Third Century

Key Accomplishments:

- Developed and implemented a programmatic evaluation rubric and ROI tool.
- Created and implemented new visitor gallery experiences.
- Planned for the new Library Research Center and New Gallery exhibition.
- Formed the Experience Planning Committee.
- Identified and articulated current and potential audiences.
- Developed and implemented a digital marketing strategy.

2017–2018:

- New Gallery Exhibition space: Development and implementation plan
- Academy Co-op Experience (ACE): Being designed fall 2016 for formal implementation spring 2017
- Superior Service Strategy: Identify key visitor personas; design experiences for each type of persona; develop tools and train staff to engage these core visitors
- Quality Assurance Program: Development of a measurement system that supports a culture of continuous improvement

- Upgrades to Dinosaur Hall and Public Spaces: Identify funds and enhance spaces for stronger connectivity with the New Gallery
- Brand Identity: Create a clear and concise brand identity package that effectively communicates the Academy’s dual brand positioning and its full complement of programs
- Student Experience: “Intensify and Improve the Student Experience” (strategic initiative of Drexel’s plan) by creating attractive social programs that enhance Drexel student involvement with the Academy

Questions:

- *What are our greatest opportunities and challenges in providing visitors a fun, authentic, awe-inspiring experience?*
- *Is our plan missing anything?*

Goal IV: Education

Become the premier learning lab in the Philadelphia region for the natural and environmental sciences.

Strategic Objectives

A. *Build strong collaborations across Drexel schools to extend the educational reach and competence of the Academy.*

Updated: The original goal has been updated as follows: *Build strong collaborations across Drexel schools to extend the educational reach and competence of the Academy especially in early childhood education.*

1. Develop museum education courses that could be offered as part of a career/professional development curriculum.
 - **Ongoing:** Courses developed and offered as part of Museum Leadership program
2. Hire a new joint (ANS/Drexel) position for research in informal learning, in particular after-school STEM education, learning in museums, and use of technology in museum education/exhibits.
 - **Updated and In-progress:** The original goal has been updated as follows: Hire new Early Childhood Specialist at ANS to help strengthen early childhood projects at ANS and partner projects with Drexel University in Promise Zone
3. Create a science teacher certification program/graduate program for professionals with STEM degrees.
 - **Complete:** ANS is part of Drexel UTEACH and Dragon Teach programs that help STEM professional transition to teaching and also help STEM undergraduates explore STEM teaching opportunities

- **New:** ANS will become an Organizational Provider for Pennsylvania Quality Assurance System (PQAS) strengthening the Academy's early childhood programs.
4. Create new programs that further leverage our existing resources and/or expertise
 - **Ongoing:** Developing early childhood programs and submitting grants to fund these programs.

B. Leverage the Academy's educational resources to create new revenue opportunities and to promote the One University concept.

1. Leverage the success of the WINS program to create and implement new research projects, offering online courses (noncredit, possible certificates), and significantly increase the number of students served.
 - **In-progress:** Conduct assessment of WINS program
 - **In-progress:** Based on evaluation results submit grant to expand WINS model to other organizations
2. Expand opportunities to partner with schools to leverage resources and children's passion for learning and exploration **Updated and In-progress:** The original goal has been updated as follows: Expand opportunities to partner with schools to leverage resources and children's passion for learning and exploration. Concentrating in two areas: Partner schools in the Promise Zone in West Philadelphia and fee-based contract schools.
 - **Ongoing:** Added three new contract schools and developed on-going relationship with Science Leadership Academy Middle School and Early Childhood Centers in Promise Zone
 - **Ongoing:** Continue to provide support through professional development, coaching, and in-class room instruction for early childhood centers and elementary schools in the Promise Zone
 - **Ongoing:** Continue to develop partnerships with new contract schools
3. Repackage what we are already doing to leverage Drexel's ability to use technology to reach broader audiences.
 - **Updated/In-process:** The original goal has been updated as follows: Repackage STEM curriculum developed by ANS as sellable products.
4. Use the resources of the School of Education to increase revenue through Act 48 credits and CEUs.
 - **Updated:** This goal has been absorbed into A(3) and B(2).
5. Use Drexel eLearning to partner with the School of Public Health and others on relevant topics that either increase awareness or offer new fee-based programs and lectures.
 - **Updated:** This goal does not fall into the new strategic direction of the Education department and will not be completed

C. On hold: *Create a science initiative involving a public constituency in which the Academy can be recognized as a leader. (Examples include NASA programs (where people go to experience real science); School for Field Studies of Boston University; Earth Watch; and Road Scholar).*

1. Develop a white paper on the opportunities and challenges of engaging global communities in a mission-critical educational and/or scientific endeavor

Key Accomplishments:

- Successfully transitioned Education Department to refocus on grantsmanship, earned revenue, and developing strategic partnerships, especially with Drexel.
- Awarded \$685,600 William Penn Foundation grant to implement new *Science and Literacy for Success* program in partnership with Drexel University in the West Philadelphia Promise Zone.
- Became a valued member of Drexel’s School of Education, helping to forge partnerships between the two.
- Significantly increased grants including: Museums Connect for \$149,000, UL Innovation Education for \$50,000, and iTEST partner with School of Education.
- Developed and completed evaluation rubrics for all fee-based programs.
- Developed online Autism Access staff and volunteer training program.

2017–2018:

- Integrate STEM education into the literacy goals of the early childhood curriculum in the West Philadelphia Promise Zone
- Expand the Head Start on Science model, transforming it into *Science and Literacy for Success* program, to the West Philadelphia Promise Zone and select neighborhoods throughout Philadelphia
- Complete the assessment and expansion planning for WINS
- Develop a successful grants program to fund current and future initiatives

Questions:

- With the new focus on grantsmanship, what resources are necessary to be successful?
- Knowing EITC is not a sustainable funding source, how should the Education Department diversify its revenue base (fee-based programs) to ensure it is sustainable?

Goal V: Research and Sciences

Become the preeminent research and academic experiential learning institution in the natural and environmental sciences, and serve as a magnet to researchers, educators, and students by showcasing the combined strengths of Academy and Drexel University scientists.

Focus: Broader Human Impact and Public Engagement

Positioning Statement

Research is one of the core activities of the Academy. In addition to expanding our knowledge of the environment and biological diversity, research inspires and informs the Academy and its new affiliation's other missions, such as teaching, public outreach, and service. The best research institutions are those that have core faculty who are considered preeminent in their fields of study, are recognized recipients of the most competitive and prestigious research awards sponsored by public and private funding sources, have world-class research resources and facilities, and are destinations for researchers from around the world. To enhance our stature in natural and environmental sciences, we need to obtain and retain a critical mass of researchers, post-doctoral fellows, and graduate students as well as a research infrastructure (i.e., collections and research laboratories) that allow optimal development of cutting-edge programs. We should be entrepreneurial and nimble in our research direction, follow areas that may have a large societal influence in the near term, and embrace the challenges and risks of our efforts.

Strategic Objectives:

- A. *Improve integration of various research programs that span traditional boundaries and disciplines and leverage Drexel's research technological capabilities; i.e., the intellectual climate will be nurtured to encourage new and creative collaborations to emerge.*
 1. **Ongoing:** Distribute awards for cross-disciplinary research projects to staff/faculty
 2. **Ongoing:** Build a diverse Co-op program (Regular and Research) in Systematics, Earth Sciences, and Ecology
 3. **Ongoing (built into BEES):** Consider Research Assistantship, Curatorial Assistantship, and Teaching Assistantships
 4. **Ongoing:** Create Post-doctoral Research Fellows
 5. **Ongoing:** Establish an endowment-supported BEES Research Fellowship (2 year) that rotates through faculty

- B. *Establish a framework for all research and teaching programs that focuses on discovery, public engagement, and environmental stewardship.*
 1. **Ongoing:** Resolve short- and long-term facilities and equipment needs and staffing shortfalls; develop long-range plans for local and international research field stations
 2. **Ongoing:** Encourage staff to become actively involved in public programming and education (emphasize discovery, stewardship, citizen science, and community and school partnerships)
 3. **Ongoing:** Establish Science-Exhibits Advisory Committee
 4. **Ongoing (CAS Plan):** Provide relevant content to educate the public on new and controversial topics of the day, e.g., fracking, evolution; serve as a

public voice on issues and provide unbiased science

C. Encourage research in targeted staff areas of expertise while continuing to support excellent programs across the institution.

1. **Ongoing:** Develop a plan for strategic hires that can foster and enhance research, education, and outreach
2. **In process:** Develop funding strategies and plan to secure major center grants (>\$25M as lead institution) from agencies including National Science Foundation, U.S. Geological Survey, U.S. Environmental Protection Agency, and others
3. **On hold:** Establish external Science Advisory Board for periodic review and to focus research direction and promote enhanced visibility (directed toward basic research and directed research)
4. **Ongoing:** Enhance and foster excellence in experiential teaching at all levels (e.g. public and students)

Key Accomplishments:

- Established Center for Academy Science and developed CAS Strategic Plan.
- Made three strategic hires for joint positions in CAS/BEES.
- Leveraged our relationship with William Penn Foundation, resulting in more than \$4 million for the Delaware River Watershed Initiative.
- Resumed regular Academy Town Square series (CAS outreach plan).
- Integrated Drexel students and faculty into the collections and labs through classes and events, including Members Night, Back From the Field, and Town Squares.
- Initiated ANS curatorial assistantship in parallel with research and teaching assistantships within BEES.
- Placed and employed more than 20 co-ops in each of the last three spring-summer sessions.
- With donor support, developed funding for BEES doctoral students and co-ops.
- Developed future staffing/facilities/equipment plan and submitted to Drexel IA for consideration in next capital campaign.

2017–2018:

- Formulate CAS leadership plan
- Approval of the Public Engagement Plan for CAS by the Board
- Enhance funding for Co-Ops (i.e., all CAS co-ops are funded)
- Develop plan for space/lab/collection shift from ANS to new BEES location
- Increase outreach from Academy to Drexel's Enrollment Management for increased student enrollment

Questions:

- Communicating science is a top priority for the Academy. What issues allow us to make the greatest impact and engage the public?
- Are we missing any opportunities or activities that would further these objectives?
- What are the biggest challenges in maintaining the growth and stability of CAS?

Status:

- **Completed:** work is done
- **Ongoing:** work has been completed and has been incorporated into our operating process
- **In-process:** work has begun, but is not complete
- **On hold:** substantive progress on this goal is beyond the 12–18 month time horizon
- **New:** new goal under the strategic objective