EDUCATION
ADVISORY
• BOARD •

Consideration for Developing Centers for Innovations: Structure, Funding, Leadership, and Outreach
Custom Research Brief

RESEARCH ASSOCIATE
Nalika Vasudevan

RESEARCH MANAGER
Katie Sue Zellner

TABLE OF CONTENTS

THE ADVISORY BOARD COMPANY
WASHINGTON, D.C.

I. RESEARCH METHODOLOGY

Project Challenge

Leadership at a member institution approached the Roundtable with the following questions:

- **Leadership and Administration:** To whom does the leader of a center for innovations directly report? Do other university leaders guide the center, formally or informally? In what instances does the center director collaborate with university administrators and with faculty members?

- **Funding:** At other institutions, which sources of income support the center for innovations? What proportion of the budget does each funding source contribute? Is the center self supporting or revenue neutral?

- **Operations:** About how many personnel are dedicated to the center for innovations? How are staff members distributed over different areas of responsibility? What types of qualifications do ideal staff candidates possess? What technology tools do other institutions implement to facilitate center services? What types of technologies are useful for identifying new opportunities for funding and entrepreneurial collaboration?

- **Industry-Driven and Entrepreneurial Innovation:** What types of industry-oriented opportunities or partnerships exist for faculty and students? What tools exist to assist faculty with entrepreneurial research opportunities? How do centers for entrepreneurship and applied research at contact institutions build and manage relationships with industrial partners?

Project Sources

- Education Advisory Board's internal and online research libraries. www.educationadvisoryboard.com
- National Center for Education Statistics [NCES]. http://nces.ed.gov/
- Britt, Ronda. "Academic Research and Development Expenditures: Fiscal Year 2009." National Center for Science and Engineering Statistics and National Science Foundation. July 2011. http://www.nsf.gov/statistics/nsf11313/pdf/nsf11313.pdf

I. RESEARCH METHODOLOGY

Research Parameters

The Roundtable interviewed directors and assistant directors of centers for innovations at public universities.

A Guide to the Institutions Profiled in this Brief					
Institution	Location	Type	Approximate Enrollment (Undergraduate / Total)	Classification	Research Expenditures for Entire University (In Thousands)[i]
University A	Mountain West	Public	17,300/20,000	Masters Colleges and Universities (larger programs)	$11,955
University B	Midwest	Public	6,200/7,100	Masters Colleges and Universities (larger programs)	Not Available
University C	Midwest	Public	10,000/11,000	Masters Colleges and Universities (larger programs)	Not Available
University D	South	Public	39,100/49,100	Research Universities (very high research activity)	$868,688
University E	Midwest	Public	19,400/24,600	Research Universities (very high research activity)	$235,492
University F	Midwest	Public	11,100/14,200	Research Universities (high research activity)	$71,856
University G	Mountain West	Public	14,600/16,500	Research Universities (high research activity)	$143,010

Source: National Center for Education Statistics, National Center for Science and Engineering Statistics

---

[i] Ronda Britt, "Academic Research and Development Expenditures: Fiscal Year 2009, National Center for Science and Engineering Statistics and National Science Foundation, July 2011, http://www.nsf.gov/statistics/nsf11313/pdf/nsf11313.pdf

II. EXECUTIVE OVERVIEW

Key Observations

❖ **Contacts report that center directors typically seek guidance from three distinct sources: the university president and vice presidents for regional development; the school of business; and advisory boards.** Contacts explain that in the early stages of a center's development, the president typically provides the most direction for strategic planning. Advisory boards for centers for innovations are comprised of both university and community leaders.

❖ **Most contact institutions house centers within the university under the direction of the president or vice president for regional development, but some centers are housed within the school of business to better expose the center to business school faculty and students.** Centers that are incorporated into the central university structure, under a president or vice president, typically collaborate with research-oriented offices, such as the Small Business and Technology Development Center (SBTDC) and Office of Research and Sponsored Programs.

❖ **Almost all centers receive partial funding from the university. Other sources of funding include state governments, U.S. Small Business Administration, private contributions, and service fees and payments charged to third-parties leasing space in a center.** Only University C houses a self-supporting center that contributes revenue to the university. Additionally, at only one contact institution, **University B**, have administrators considered levying an entrepreneurship fee for student groups using the center's space.

❖ **Contacts describe several essential staffing positions: center director, assistant director for operations, assistant director for outreach, program coordinators, technology transfer staff, administrative staff, and student interns.** Centers with larger staff also hire consultants for small business owners and/or engineers, chemists, or lab technicians to manage research in center labs or incubators.

❖ **Faculty members reportedly seek out centers for innovations in order to obtain support for applied research and commercialization, use lab space, and find consulting engagements.** Contacts suggest that center directors proactively engage with faculty by developing relationships with academic deans and department heads. Additionally, contacts recommend several strategies for introducing faculty to applied research, such as soliciting faculty to develop research proposals for industry partners and offering faculty assistance with commercialization as well as start-up business support.

❖ **At most contact institutions, students have access to the centers' services for entrepreneurs and applied research. Additionally, centers often organize programs that are specifically targeted towards students.** For example, students can engage in applied research and consulting for industry clients through class projects or center competitions. Centers also typically designate work space for students and offer seminars and workshops to support student entrepreneurs.

❖ **Contacts suggest that centers for innovations attract industry partners by serving as contract research organizations, assisting with commercialization, and offering reduced-cost services.** Furthermore, many centers dedicate a large portion of programming towards outreach and networking with potential industry partners.

III. ORGANIZATIONAL OVERVIEW OF THE CENTER

Center Reporting Structure and Activities

The table below describes the scope of center activities and reporting structure across profiled institutions.

| Center Leadership and Activities		
Institution	Executive with Center Oversight	Center Activities
University A	Vice President for Research and Economic Development	• Manages applied research contracts • Oversees technology transfer • Connects students to industry clients through career services
University B	President	• Manages applied research contracts • Houses a mixed-use business incubator, analytics lab, and nano-scale • Collaborates with Small Business and Technology Development Center (SBTDC)
University C	President; College Dean and Chair of Management and Marketing Department in College of Business	• Manages applied research contracts • Houses a business incubator • Offers entrepreneurship education programs • Collaborates with Small Business and Technology Development Center (SBTDC)
University D	Chair of Marketing Department in the Business School and Advisory Board	• Offers academic certificate programs for students • Offers entrepreneurship education programs • Organizes networking and recognition events for alumni
University E	Board of Directors (Chancellor, President, Vice Chancellor of Research, Vice Chancellor of Agriculture)	• Manages applied research contracts • Houses a mixed-use business incubator and labs • Leases space to science departments and faculty, who also rent center laboratories • Collaborates with an independent non-profit for technology transfer
University F	Dean of College of Business	• Manages applied research contracts • Offers entrepreneurship education programs • Houses business and technology incubators and labs • Offers financing and access to capital
University G	Vice President of Commercialization and Regional Development	• Manages applied research contracts • Oversees technology transfer • Collaborates with Small Business Development Center

III. ORGANIZATIONAL OVERVIEW OF THE CENTER

Across contact institutions, centers for innovations typically manage industry-oriented applied research and collaborate with other functional offices in the university. Contacts describe two organizational models for centers for innovations: one in which the university president or vice president oversees the center and one in which a business school leader oversees the center. The following graphics approximately illustrate these two models.

**1** **Center Falls under Executive Office but Collaborates with Many Additional Offices**

Because responsibility for intellectual property, applied research, and small business development lies with several offices at contact inststitutions subscribing to model one, the center for innovations staff coordinates with staff in the offices outlined below. The centers for innovations at **University A, University B, University C, University E,** and **University G** roughly adhere to the following university structure.

Organizational Relationships among Center and Other University Departments
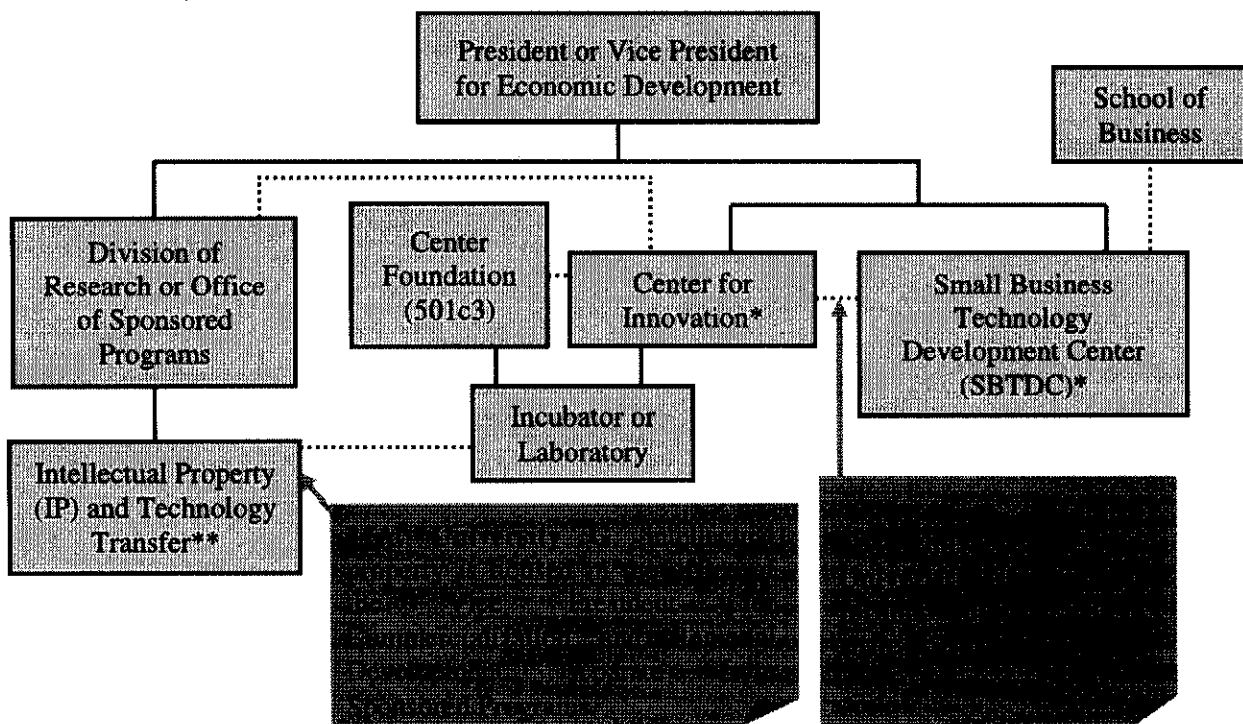
2 **Center is Housed within the School of Business**

At **University D** and University F, the center is housed within the school of business. Under this model, the center reportedly benefits from greater access to students.
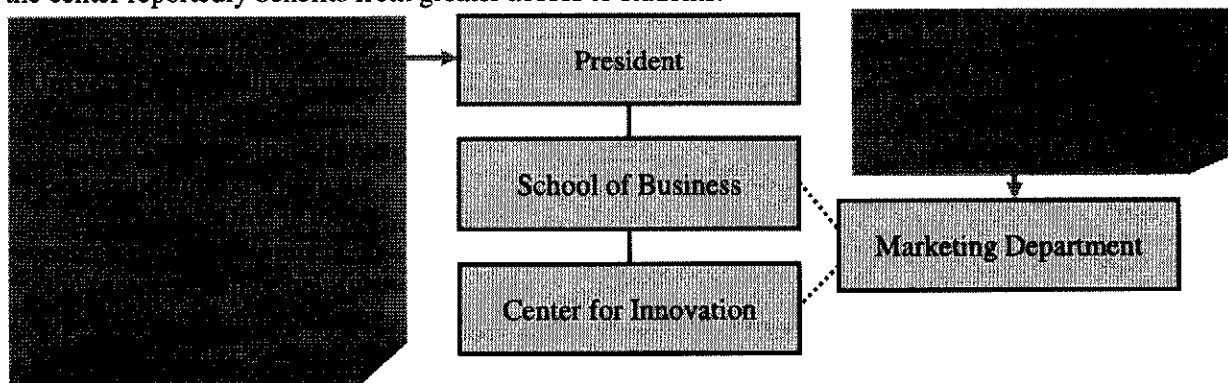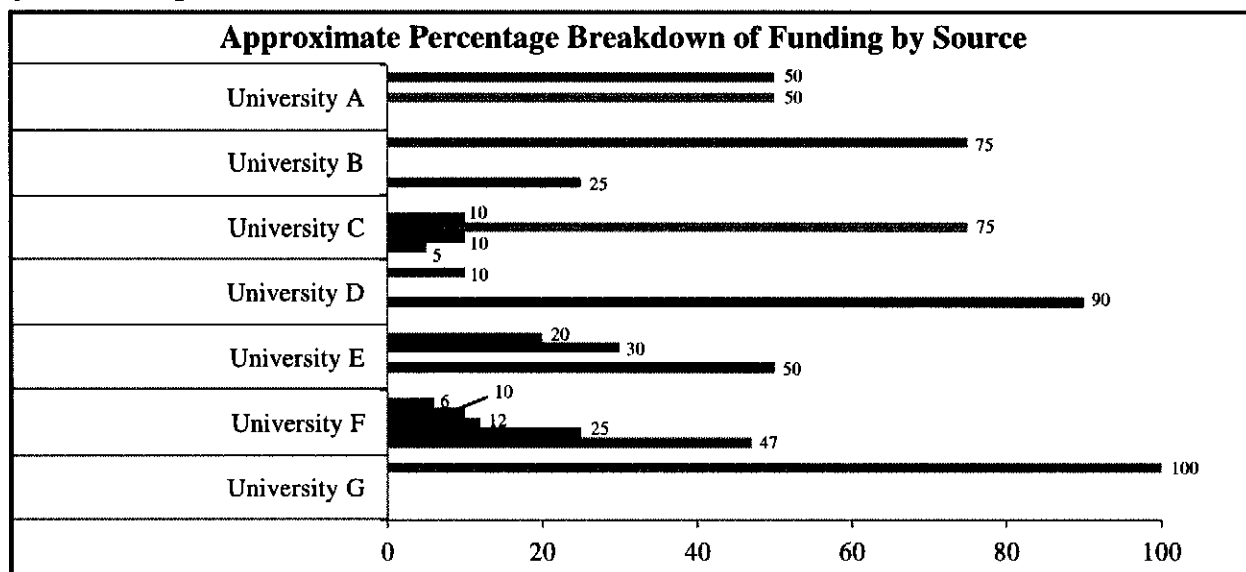
IV. FUNDING SOURCES AND STRUCTURES

Six of the seven centers at contact institutions draw on university central funds to support some portion of their operating expenses. Only the center at **University C** is completely self-supporting, but contacts at University E report that the research campus will eventually operate under a revenue–neutral model as well. Other sources of funding consist of federal and state grants, private contributions, and service fees.

Sources of Funding for Centers for Innovations

The following chart describes centers' funding sources and the corresponding portion of budgets funded by each funding source across contact institutions.

Approximate Percentage Breakdown of Funding by Source

University	Values
University A	50, 50
University B	75, 25
University C	10, 10, 5, 75
University D	10, 90
University E	20, 30, 50
University F	6, 10, 12, 25, 47
University G	100

(x-axis: 0, 20, 40, 60, 80, 100)

■University Funding
Centers at **University A, University B** and the **University G** are largely dependent on university funding. However, **University C** is self-funded and contributes revenue to the university.

■State Government
The state governor earmarked start-up funding for the **University E's** research campus in the state budget. The money was allocated to the university, under the condition that the university raises additional funds to sustain the center.

■U.S. Small Business Administration
Contacts at **University C** report that the U.S. Small Business Administration (SBA) provides the majority of the center's funding through grants. Similarly, at **University A**, SBA funds help support staff salaries and technology transfer projects. The U.S. Economic Development Administration (EDA) supports programs for regional development at **University F**, such as a regional research center.

■Private Contributions
The center at **University E** partnered with a developer that will finance a portion of construction costs and manage the property and leasing contracts of the new facilities. Because the center plans to be independently financed, the university will eventually rent space from the center to house departments and use lab space. **University D's** center relies solely on donor contributions from board members. The center at **University F** depends both on annual contributions from private donors and endowments.

### ■Service Fees and Space Rents
Although contacts at **University B** and **University C** explain that service fees are a nominal source of funding, incubator rents and service fees comprise a large proportion of the center's funding at **University F**.

IV. FUNDING SOURCES AND STRUCTURES

Center is Completely University-Sponsored in its Programs and Funding

At **University A**, **University B**, and **University C**, university administrators secure funding sources and manage operations for centers for innovations.

Center Partners with Independent Non-Profit for Programs and Funding
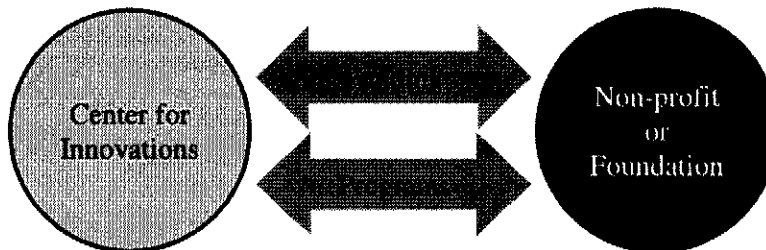
The model above illustrates areas of collaboration between the center for innovations and its affiliate, an independent non-profit foundation. Contacts at **University E**, **University F**, and **University G** note that independent, non-profit organizations and foundations support centers for innovations. Although centers and foundations are separate organizations, contacts maintain that the bodies are closely integrated with regards to programming, space, and funding.

Roles of Foundations in Center Activities

◆ **Manage Funds:** Contacts at **University F** report that because multiple sources of funding support the center for innovations, a separate non-profit organization, a foundation for the center for innovations, manages select sources of funding, allowing for maximum flexibility in dispensing funds.

◆ **House Incubators and Labs:** At **University F** and **University G**, center foundations house incubators and labs. Center staff and clients have access to the facilities housed within the foundations.

> At **University G**, the foundation space includes a space dynamics lab, an energy dynamics lab, and the office for commercialization. The foundation manages the labs, while the university oversees commercialization.

While the incubator at University F serves as a general work space for entrepreneurs, the labs at University G are highly specialized for niche areas of research.

◆ **Licensing Support:** At **University E**, the research campus, which is under construction, will also house an independent non-profit, which will provide clients with licensing and commercialization support.

IV. FUNDING SOURCES AND STRUCTURES

Entrepreneurship Fees for Students Groups

Across contact institutions, centers for innovations do not collect a campus-wide entrepreneurship fee from *all* students. However, center administrators at **University B** have considered charging student groups a fee for renting space and accessing the center's resources. Contacts report that when student groups express interest in renting space, the center follows the following protocols:

Student groups enjoy privileges as clients. For example, the center director would take the student group on a tour of the center to introduce new student groups to the space and service options

Contacts at University B state that the center charges student groups at a discounted rate, 50 percent of the typical fee for center space and services.

9

V. LEADERSHIP AND REPORTING STRUCTURES

Center Director Role and Responsibilities

At most institutions, leaders of centers for innovations are referred to as director or executive director. Alternatively, at **University G**, the leader holds the title Vice President for Commercialization and Regional Development.

Director Responsibilities:
* Manage staff
* Outreach to new industry partners
* Liaise with university leadership and faculty

Most Center Directors Demonstrate Business Experience

Several contacts explain that directors must have earned a PhD or terminal degree. At other institutions, such as **University A**, **University F** and **University E**, contacts explain that university administrators hire directors based on their business background. Similarly, at **University B**, the center is currently seeking a director of tenant relations with experience in outreach.

Center Oversight and Direction

Contacts describe three different leaders who oversee center activities and provide guidance:

President of University

At **University B** and **University C**, the center directors report directly to the presidents of the university. Although the center director at University C also seeks guidance from the chair of the department for management and marketing and the business school dean, contacts report that the president is the center's chief advisor.

Vice President for Research or Economic Development

The center director at **University A** reports to the Vice President for Research and Economic Development, and the director at **University G** reports to the Vice President for Commercialization and Regional Development. Contacts at University A explain that the physical proximity of their office to the Vice President's allows the director to discuss new projects and solicit university funding more easily.

Faculty Leaders in School of Business

The centers at **University D** and **University F** are housed within the school of business, and directors report to business school administrators. Contacts explain that the center director at University F initially reported to the president, but the center later moved to the school of business to encourage greater interactions with business school students. Similarly the SBTDC at **University B** reports both to the university president and school of business to gain access to business school faculty.

Advisory Boards Provide Direction from the Community

At **University B**, **University D**, and **University E**, centers for innovations also seek guidance from an advisory board comprised of university and community leaders. Typical Members include:

* Chancellor
* President
* Academic Deans
* Division of Research staff

* Local Entrepreneurs
* Community Leaders
* Regional Economic Development Partner Representatives

University Leaders
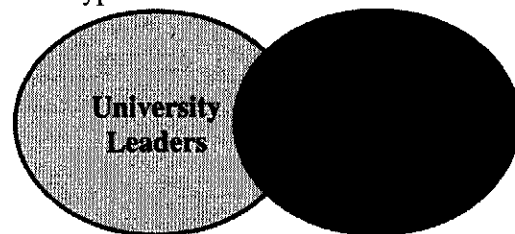
VI. CENTER OPERATIONS

## Essential Staffing Positions for Centers for Innovations

Across profiled institutions, staffing structures vary depending on the size and activities of the center. The staff positions described below are primarily located within the center for innovations; however, some positions may be located within other offices or centers. For example, lab technicians are generally located within an incubator or lab managed by the center.

Variations in Center Staff Size and Composition

Small Staff Several institutions surveyed have centers with relatively small staffs. At **University A, University C, University D**, and **University E**, one to four staff members hold the following positions: director, outreach and marketing coordinator, program coordinator, contracts and tech transfer manager, and administrative staff. These essential positions are bolded in the diagram below.

At **University C** and **University F** operate under a larger staffing structure of 12 to 13 employees; beyond the essential positions described above, small business consultants comprise additional staff positions.

Large Staff At **University G**, the center's foundation and two labs have 600 staff and consist of engineers and student researchers, technical staff, and administrators.
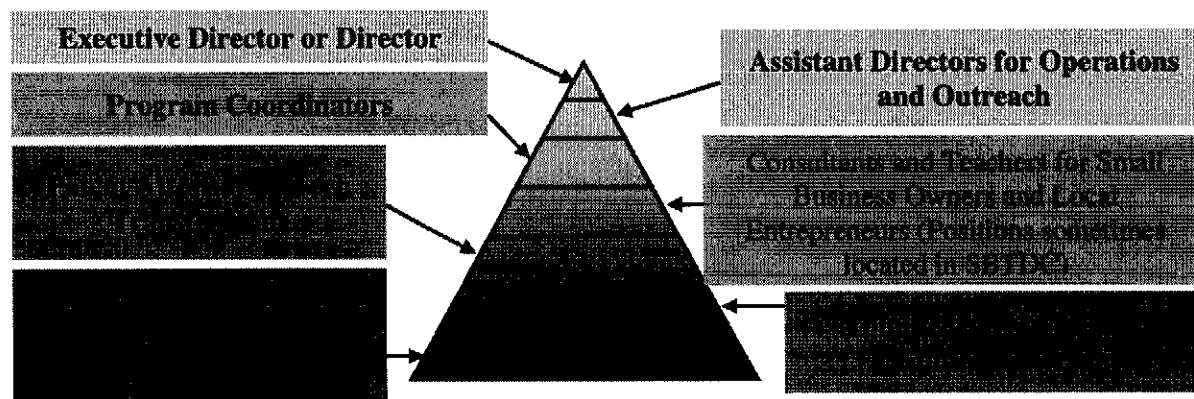
(**Bolded** position titles are identified as key positions across contact institutions)

Center Directors Value Experienced Staff

Several contacts explain that when hiring staff, center directors seek expertise in business, venture capital, and outreach. Additionally, lab technicians and engineers may require certifications to handle lab equipment, and some staff members may hold an MBA or MA.

Technology Tools to Facilitate Operations

Contacts suggest the following technology tools to facilitate operations in the center for innovations:

Banner	The center at University B uses Banner databases to track its relationships with industry partners.
incuTrack	At University B, contacts report that incuTrack is software used to track the incubators, space, and equipment usage.
Inteum	At University G, the center uses Inteum to manage the prosecution of patents.
Ptech	Contacts at University B recommend Ptech as a valuable tool to identify new companies to partner with on research endeavors.

11

VII. ENGAGING FACULTY AND STUDENTS WITH THE CENTER

Industry-Oriented Opportunities for Faculty Members

Contacts report that faculty members enjoy a variety of opportunities to engage with the center and industry partners:

Applied Research	
Lab Space	
Assistance with Commer- cialization	
Consulting	

Developing Relationships with Faculty Members

Several contacts explain that engaging faculty members in industry-oriented research is difficult because faculty members are uninterested in applied research or have existing research relationships with industry partners. Strategies for engaging faculty members in the centers' activities are outlined below:

> Contacts at University G recommend that university tenure requirements incentivize applied research.

Advertise Support Services to Faculty

Contacts at **University A** explain that faculty members are more inclined to pursue applied research opportunities if they are aware of the support services available through the center for innovations. Therefore, educating faculty members on the center's support for applied research can be a key strategy to incentivizing applied research for faculty.

Engage Faculty with Industry Relationships

Many faculty at **University E** have already developed relationships with industry partners. Therefore, contacts suggest that the director be tasked with investigating the status of industry-oriented research on campus, reaching out to specific faculty members with existing research responsibilities and coordinating research partnerships through the center.

Connect with Academic Deans and Departments

At **University B**, the director initially reported to an academic dean, which gave the center great access to faculty members. Similarly, the center at University F moved from the president's office to the school of business to gain greater access to students and faculty. At **University G**, the center staff bring potential projects to department chairs, who then recommend faculty members who could develop research proposals to submit to industry partners.

VII. ENGAGING FACULTY AND STUDENTS WITH THE CENTER

Compensation for Faculty Work with the Center

Several contacts stress that faculty workload and compensation should reflect their contributions to the center. Contacts suggest two types of compensation for faculty who work with the center and engage in applied research:

Course Releases

At **University B**, faculty who conduct applied research or oversee student groups working with clients receive a course release as compensation.

Grants

Contacts at **University G** explain that faculty receive additional compensation through research grants for their work with the center.

Center Programs and Research for Students

Centers for innovations can provide support services and learning opportunities for both undergraduate and graduate students. Contacts describe the following methods for engaging students through center activities and applied research:

Applied Research	Although few contacts report that students engage with applied research, contacts at **University G** explain that graduate and undergraduate students are hired to work as engineers and researchers in the center's labs. Faculty at **University B** often engage undergraduate students in lab research.
Market Research and Small Business Development Consulting	***Students Conduct Research for Clients Through Class Projects:*** Several contacts report that students in the college of business conduct market research for industry clients. At **University B**, six to 12 faculty members will oversee approximately 12 marketing students every trimester as they develop a market analysis for center clients. ***Students Organize Independent Consulting Services:*** Graduate students at **University D** launched an independent non-profit consulting firm that offers low cost consulting for local businesses. Around six student consultants participate every year and the center director, who is also a faculty member, serves as an advisor.
Student Competitions	Contacts report that student competitions and challenges are effective ways to engage students in innovative thinking. At **University G**, the center organizes a competition in which student teams in the business school submit business plans and marketing strategies for a particular piece of technology pitched by the center. Similarly, at **University D**, the center organizes two competitions for students: • The fist challenge is open to all students on campus and allows competitors to submit business plan ideas for local entrepreneurs to judge. • The second challenge allows approximately 12 to 18 teams of MBA students per year present venture plans to panels of judges from the business community.

Center Programs and Research for Students (cont.)

Workshops and Seminars on Business and Entrepreneurship	***Centers Organize Entrepreneurship Lectures:*** The center at **University C** regularly offers special workshops that serve as a forum for students to share ideas for entrepreneurship in addition to a CEO-college session, a program during which local entrepreneurs share their start-up stories with students. ***Centers Offer Workshop Series for Entrepreneurial Students:*** Similarly, the center at **University D** organizes a start-up 101 workshop series held for students interested in managing their own businesses. The workshops are held for three consecutive nights with each session lasting three to four hours; workshops are led by local entrepreneurs, alumni, and other business professionals.
Venture Capital	The center at **University F** launched the first student-run venture capital fund in 2006. The fund is managed entirely by students and invests in ventures pitched by students or recent graduates.
Student-Designated Work Space	At **University B**, any student can request access to the incubator and lab space. Similarly, at **University C**, the center has designated a start-up studio as a space for students to explore entrepreneurship ideas and partner with clients. Students at **University F** who intern with a donor-funded internship program gain access to the technology incubator where they can work on their own ventures.
Internships and Work Opportunities	Contacts at **University A** stress that industry partners are interested in engaging with universities largely to gain access to students who may become future employees. Therefore, the center director meets regularly with career services to exchange information on industry partners and internship and work opportunities for students. At **University G**, students learn about the patent process or business development as interns in the center.
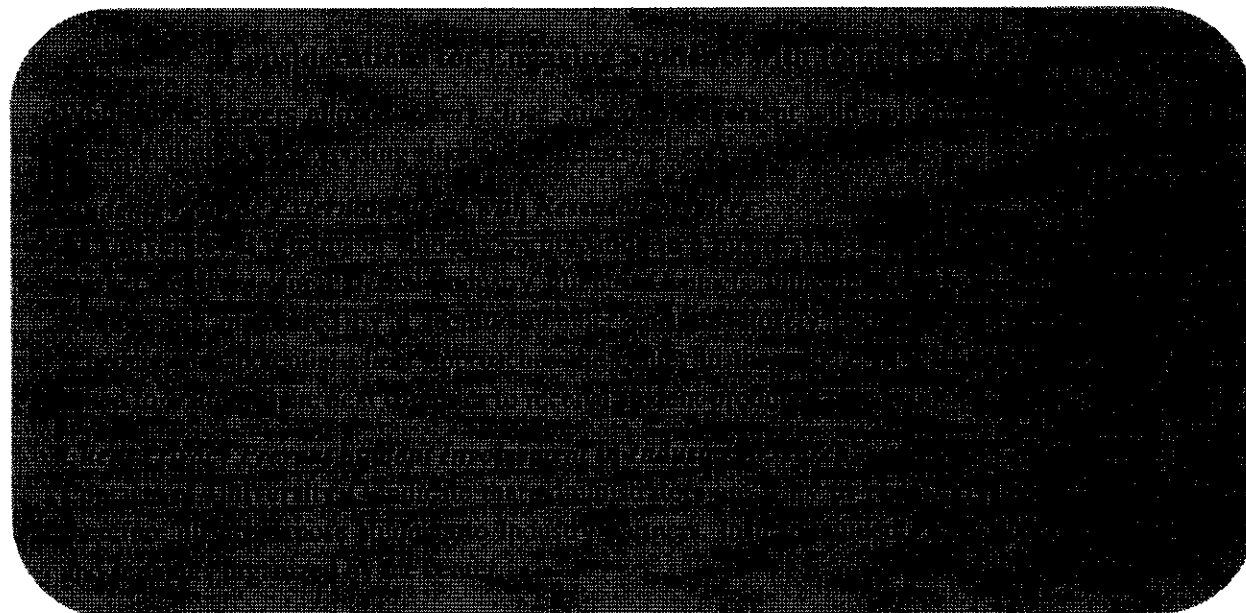
VIII. BUILDING RELATIONSHIPS WITH INDUSTRY PARTNERS

Building Rapport with Industry Partners

Across profiled institutions, contacts describe several strategies for building and maintaining healthy relationships with industry partners:

1 Conduct Rigorous Outreach

Across profiled institutions, contacts stress the importance of conducting outreach. At **University C**, all staff participate in outreach efforts, attending receptions and hosting seminars to meet potential clients. Contacts at **University D** suggest maintaining an e-mail newsletter and listserv to communicate regularly with new and previous clients.

2 Offer Low Cost Services

Many clients are attracted to the services provided by centers for innovations because of the low-cost fees for high-quality programs. At **University D** and **University F**, industry clients pay very low fees to attend seminars and training programs. Contacts at **University C** stress that the center is dedicated to delivering services above monetary value; therefore, clients do not pay for individual business counseling, paying only for seminars and access to work space.

3 Provide Customized Service

Contacts at **University C** highlight the center's individualized approach to client services and counseling as a key strategy for building successful client partnerships. For example, the center director often goes beyond meetings and counseling sessions to help a client and will conduct site visits to better understand a client's needs.

4 Leverage University Connections and Resources

Because of the center's affiliation with the university, the center can leverage its position and take advantage of the university's existing relationships and resources.

➥ *Alumni Relations:* At **University D**, the center is able to recruit volunteers and potential industry clients by reaching out to the alumni community. Through a rewards and recognition program, the center annually identifies and celebrates 100 of the fastest growing businesses owned or managed by university alum. Through the application process and award celebrations, the center is able to develop strong relationships with local entrepreneurs.

➥ *University Culture:* Contacts at **University C** highlight the importance of establishing a university culture that welcomes industry partnerships. For example, contacts explain that industry partners are hesitant to engage with university partners that seem unorganized or with faculty members who are not receptive to industry.

5 Offer Financing and Grant-Writing Support to Local Businesses

Contacts at **University F** state that the potential of financing attracts many industry partners to the center for innovations. In addition to administering funds from the U.S. Small Business Administration, the center has helped organize several angel funds, which are supervised and managed by local community members. Contacts report that angel fund managers seek guidance from the center. Finally, the center also attracts new clients by offering assistance in the grant-writing process.

6 Join Regional and Networking Organizations

The center at **University A** joined a regional development organization associated with another university

VIII. BUILDING RELATIONSHIPS WITH INDUSTRY PARTNERS

and regularly attends meetings to seek out new partners. Additionally, the center director invites specific faculty administrators to join these meetings and brainstorm ideas for industry-oriented research.

## Strategies for Facilitating Connections between Industry and Faculty

Contacts at **University A** and **University G** explain that it is important to engage faculty early when building relationships with industry partners. Below are programmatic strategies for facilitating research partnerships between faculty and industry clients:

Research Showcases

The center director at **University A** organized a research showcase to highlight research faculty projects and intellectual property for an audience of potential industry collaborators. In the past, contacts report the event has included presentations by 45 faculty members, poster displays, and networking time for faculty and industry clients.

Industry Advisory Committees Partner with Faculty Members

Industry Advisory Committees consist of local business partners and community members who are tasked with advising faculty members on their research focus. Contacts at **University A** report that organizing these committees is a successful tactic for engaging industry partners and fostering collaborations.
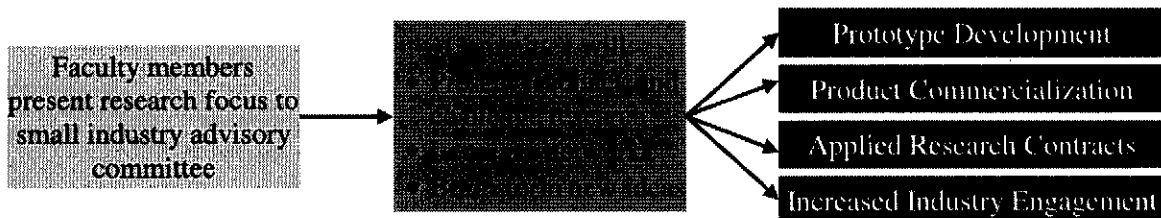
Membership-Based Institutes

At **University G**, the center reportedly engages new industry clients through a membership with a university institute. The institute typically focuses on a niche field and institute membership gives industry clients access to applied research opportunities and university resources.

If a department is developing broad research competencies around a specific area, the center will help the department create corresponding institute, which serves as a formal point of contact for industry clients.

Corporate partners can then purchase memberships to the institute and gain access to researchers, research facilities, and preferential assignment of interns.
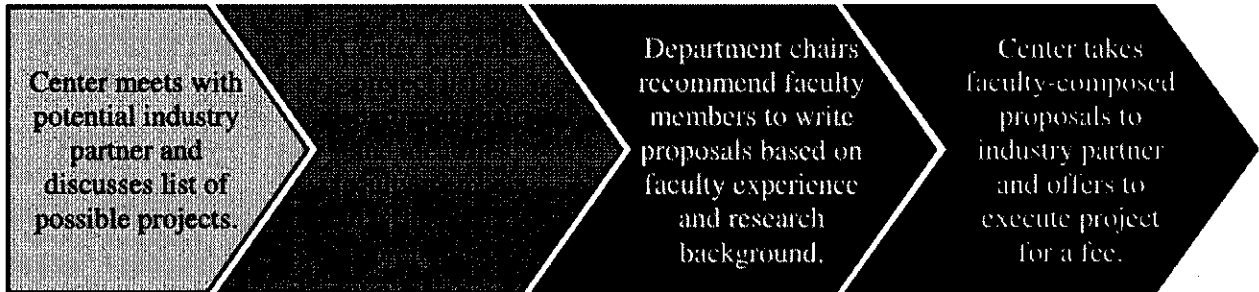
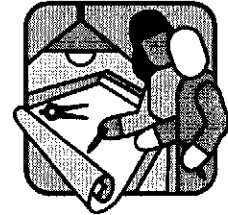## Strategies for Facilitating Connections between Industry and Faculty (Cont.)

Faculty Proposals for Potential Industry Contracts

Contacts at **University G** report that the center will occasionally function as a contract research organization for industry partners and will solicit faculty members to propose a research contract and submit this proposal to potential corporate partners.

Center meets with potential industry partner and discusses list of possible projects.

Department chairs recommend faculty members to write proposals based on faculty experience and research background.

Center takes faculty-composed proposals to industry partner and offers to execute project for a fee.

Start-Up Commercialization Assistance

Because small start-up companies often struggle to promote their products, they will often seek out the assistance of patent attorneys through a university. Contacts at **University G** explain that when a start-up company approaches the center, the center staff will arrange for the university to take ownership of the product and incur the licensing costs. When the product receives its patent, the center turns the patent over to the start-up company. However, the scope of collaboration does not end with technology transfer, rather the center will often engage the start-up in other center services as well, such as developing a marketing strategy, developing a business plan, and seeking out investors.