

INCUBATOR FOCUS GROUP STUDY

MARYLAND TECHNOLOGY DEVELOPMENT CORPORATION



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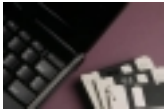


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EXECUTIVE SUMMARY

Maintaining an environment conducive to business is a paramount concern for the State of Maryland. For small businesses in particular, the state has several initiatives in place to help their ideas flourish and to help them become larger businesses. One of these is the Maryland Technology Development Corporation (TEDCO). TEDCO has partnered with the National Business Incubation Association and The Staubach Company, an international commercial real estate strategy and services company, to analyze the current environment for business incubators, to determine the ideal conditions that would maximize incubators' success, and to outline priority actions for them.

The research, based on focus groups with 28 incubator tenants (approximately 25 percent of all incubator tenants in Maryland), uncovered a wide disparity in the physical conditions, and the quantity and quality of services provided. For incubators with biotechnology companies, the greatest concerns about physical conditions focused on the need for better design, and for tenant input in design efforts. In essence, labs tend to accommodate scientific needs, but not the growth of companies.

Technology infrastructure and advisory support is another area with an inconsistent level of service. For tenant companies to properly focus on their business plan and grow, they need an adequate level of advice and support functions from the incubators.

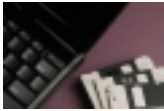
Improvement also is needed in establishing and expanding links with universities and other research organizations. Especially important was the need for greater communication about the available links because many incubator tenants are not aware of their availability, or what the links can provide to help a business grow.

Access to financial advice and the capital markets were also cited as an area that requires attention. There are some successful programs to facilitate these introductions, but they are not formalized. The lack of access is even more difficult for biotech tenants because their products often are in development for long periods, which can dissuade the interest of financiers.

A final area that was evaluated was marketing and other services that would help tenant companies make the transition to life outside the incubator. Again, there was a wide disparity in services offered, with most leaning toward the need for additional services.

Overall, business incubators in the state are in varying stages of development themselves. The focus groups seem to indicate that a more consistent level of service could be delivered within the incubators and by increasing the connection between and among the incubators and tenant companies across the state. The Priority Actions at the conclusion of this report provide recommendations to help.





INTRODUCTION

Promoting technology development in the State of Maryland is the mission of the Maryland Technology Development Corporation (TEDCO), an independent but state-funded organization. To accomplish this mission, TEDCO has identified the following goals:

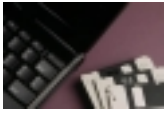
- Introducing companies with federal labs and helping them work more closely with them.
- Working with universities to get technology out of the lab and into the market more quickly.
- Helping companies in business incubators accelerate their growth.

To achieve the last goal, TEDCO embarked on multi-part approach in January 2000 to better understand the incubation process in the U.S. and abroad. It established a partnership with the National Business Incubation Association and The Staubach Company, an international commercial real estate strategy and services company, with the following goals in mind:

- Identify best practices in the incubation process of private- and public-sector incubators worldwide.
- Determine the circumstances of incubators in Maryland via focus groups and a survey; use the input of incubator tenants as a way of identifying effective practices, new initiatives that need to be undertaken, and goals for the overall incubation process for the state.
- Establish priority programs and determine how financial resources should be applied to improving the incubator program.

Of the approximately 130 companies in publicly funded incubators in the suburban Maryland and Baltimore areas, 28 attended the focus groups. Participating companies ranged in size from proprietorships to fast-growing Internet companies with 22 employees. Represented were biotech companies with extended research cycles, biotech/pharmaceutical companies that move product rapidly to market, manufacturers and traditional and new economy systems integrators. Time spent in the incubator was anywhere from one or two months to almost five years.

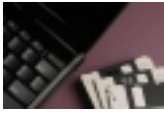




Tenants from the following incubators participated:

- ◆ Technology Assistance Program (TAP) University of Maryland
- ◆ Maryland Technology Development Center
- ◆ Emerging Technology Center (Baltimore)
- ◆ Bard Life Science Laboratory (Baltimore)
- ◆ City of Baltimore Development Corporation Incubators
- ◆ Center for Business and Technology Development
- ◆ UMBC Technology Center
- ◆ Technology Innovation Center, Hagerstown





FOCUS GROUP RESEARCH

Each two-hour focus group was designed to elicit descriptions of the current incubator environment, to determine the ideal conditions that would maximize incubators' success, and to outline priority actions. A "Quick Survey" at the end provided additional information on tenants' individual needs and preferences.

A. Current Conditions

Business Planning, management, operations and services are essential, but are not consistently implemented across incubators.

Business review processes vary across incubators. In some cases there is no business plan support or reviews, and in others there is a fairly rigorous process on a regularly scheduled basis with external advisory support. One tenant described a quarterly business review process that includes a cadre of consultants with key expertise (e.g. financial, marketing, technology). In this case, the business review process includes consultant follow-up to help fine-tune the plan.

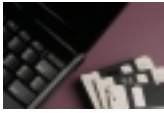
Access to the Dingman Center for Entrepreneurship was repeatedly referenced as a positive benefit to incubator tenants. The quality of the advisors, their guidance, as well as their proximity is viewed as key benefits.

Other services across the incubators range in type, depth, breadth and quality. Tenants indicated that the overall management of the facility could make the difference between growing the business or having great difficulty in succeeding. The majority of tenants are pleased with overall facilities management because it eliminates real estate "headaches" that detract them from their core business activities. However, they indicated that service levels and availability of resources could change with changes in administration or management, and they are uncomfortable with that uncertainty.

Physical Conditions vary by incubator, and are inconsistent in meeting tenants' needs.

Descriptions of physical space varied across the incubator locations, but generally there are concerns about a.) limited expansion space, b.) lack of flexibility in reconfiguring space, c.) need for appropriately designed workspace (i.e. office amenities and appeal which are factors in recruiting and retaining highly skilled workers), and d.) reasonable rents.





Additionally, some incubator tenants can use no-cost or low-cost conference rooms, auditoriums and other meeting facilities to support their needs. These facilities, including an attractive cafeteria in one case, were cited as important in creating a professional environment for conducting presentations, conferences and other internal and external meetings.

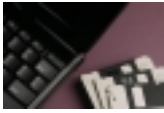
Biotech lab requirements are generally more problematic and highlight special needs.

Lab designs were a source of much discussion. In general the labs were described as new, state of the art, and in some cases spacious enough for customization and special equipment. Many tenants see the availability and content of the labs as a very positive aspect of the incubator program. Besides being equipped appropriately for biological research, some are equipped with telecommunications and Internet connections.

However, there is not much consistency in lab design or implementation. Tenants commented that there was a need for including tenants in lab design discussions, so that in the future they could participate in the overall design. General considerations include:

- Labs that offer flexibility, modularity to change configurations and expand.
- Appropriate power systems and back up systems that match the needs of the lab.
- Offering lab space and office space for tenants to match their workstyle needs; some of the labs reflect the late 19th century model “gentleman tinkers” so the lab accommodates scientists but does not support the growth of a company.
- Policies that would keep lab space available for tenants that need labs, and not allow companies, such as those in infotech, occupy the space due to lack of space availability.
- Acknowledgement that the “one size fits all” design does not reflect the needs of different tenants requiring labs.





- Improved efficiency. In one incubator the energy costs of each lab is individually metered and controlled. However, with the overall design of the system (due to minimizing the capital expense), tenants are paying exorbitant energy bills.
- Problem escalation. Tenants are extremely frustrated and although issues have been raised and discussed there are apparently no easy solutions, only some possible “band aids”.
- Obtaining updated equipment to complete research faster.

A major concern is that the supply of lab space in Maryland and the greater Washington area is far below the growing demand; companies hoping to move out of the incubator will be seriously hindered. One tenant recounted that an excellent lab space in a commercially available building was actually being dismantled because the tenant did not want to give a competitor any advantage from their lab set-up.

Manufacturing

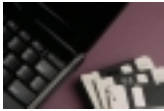
Although there was a limited number of manufacturers in the focus groups, the comments centered on manufacturing space that does not support custom operations well. Again, a better design of the space, which reflected more input from the industry sectors, is desirable.

Facility Design

Energy costs were often mentioned as excessive or out of an individual tenant's control. Different approaches and systems are in place across the different incubators; some found the energy costs reasonable, others found them to be a major problem, particularly since it was an unexpected expense and the escalation of the problem had not generated any change.

Tenants perceive that there is an innate conflict in setting priorities when an incubator is a mixed-use facility. In one case where tenants share a facility with an organization that has a different mission, they felt their needs were secondary and not given the attention needed. In that case, sharing resources was positive, but the overall support structure was set up to be more responsive to the lead tenant and facility manager, not the incubator tenants.





Business Services

Most tenants expect a basic level of business service and professional administration. Delivery of those services is inconsistent in terms of quality and quantity across the incubators. Overall, more communication about service availability and functionality is needed.

The range and quality of services varies and is managed inconsistently. Although incubator managers are seen as senior and capable, in some cases the incubators lacked professional administrative management and support resources. Relatively simple processes and services for many seem to be administered haphazardly. General business services, such mail delivery, are available but not always managed well. One tenant commented that management “is not used to the nuts and bolts of keeping all the little pieces running.” In that case, management is perceived as unresponsive.

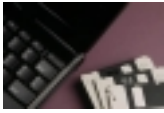
Several tenants have different expectations of how the incubator should be run and the role of the incubator manager. They feel the manager did not place their needs as a priority or have the appropriate attitude of “customer support.” Frustration about the escalation and resolution of problems was expressed, and is seen as an energy drain and waste of time for the tenants. Some feel the issues that are raised are not addressed in a timely manner, or at all.

Comments on the customer service and focus varied from poor to excellent. The lack of skills, lack of available resources, sense of urgency and accountability are some of the reasons for more negative comments.

However, the majority of tenants expressed great satisfaction with the management, and an understanding of the inherent limitations of the incubator. They said they experienced “unbelievable support,” and were complimentary of support staffs, programs and overall benefits they received.

One new incubator is co-locating “small business encouragement functions” in the building. These will include a wide range of support for tenants who are setting up and operating a business for the first time. On site will be counselors, infrastructure support such as a shared receptionist and conference rooms, and a resource library. The tenant is very enthusiastic about the incubator’s planned services.





Tenant frustration varied widely. One new tenant seemed frustrated on two levels: understanding what the services are, and how to get through red tape more easily. Although he saw the benefits of the other services available, he is in the early stage of his business and needs more basic business support and exposure, or orientation to the support services.

Technology Infrastructure

Availability and functionality of technology hardware, software and telecommunications infrastructure varies by incubator. Companies feel increased availability of these services is necessary to help preserve capital, and enhance operations.

Wiring for networks and access to T1 lines is inconsistent across incubators. In some cases the services are provided, in other cases it is not. Costs for these services are sometimes shared and considered reasonable, but in some instances the costs are considered excessive. There is general agreement that high-speed access is necessary, and that having it at a reasonable cost is very beneficial.

The availability and cost for use of shared equipment such as fax and copier machines vary widely. Most incubators provide phone services; some indicated that they are tied into the state system, which has some cost advantages, but it is antiquated and needs upgrading.

Tenants want a robust set of services, and they appreciate the support when available.

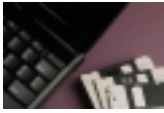
Advisory Support and Assistance

There is universal hunger for generic and specialized advisory support. Across the incubators there are different approaches to providing or connecting tenants with advisory support services.

Quantity and quality of these services varies widely, particularly in legal, accounting and other professional service areas.

The Dingman Center was repeatedly referenced as a positive source of advisory support. One example of this is the Center's monthly offering of onsite programs across the University of Maryland system, not just in the College Park location. Also, the Extension Services were positively cited as services that help identify specialists in the business schools or elsewhere; those specialists often offer free advice.





In addition, the TAP program was highlighted and complemented for its two-step approach to reviewing new applicants for the incubator program. The first step is a technology evaluation to determine if the technology is “doable” and then evaluate its practicality. The second step is to look at the business environment and evaluate the product’s potential in the marketplace. This process provides valuable feedback to the potential tenant from individuals with a variety of expertise (i.e. financial, technical, marketing, etc.).

Having access to pro bono services is seen as a benefit to being in an incubator; several unfavorable comments were made about consultants or service providers trying to sell services. For start-ups this conflicts with their expectations and financial capabilities.

Linkages

Some linkages are in place, others need to be enhanced and expanded; communication about linkages needs to be formalized and enhanced.

Some tenants commented about formal and informal linkages to universities or community colleges for faculty support, access to research, and access to interns and other graduate-level work force candidates. In one case it was noted that tenants are invited to attend all university classes, seminars, and other major events on the campus, such as Office of Technology Licensing sessions. In this instance, tenants get first-hand exposure to the types of technologies available for licensing, and direct access to the individuals who developed the technology. This is viewed as an extraordinary benefit.

However, the focus groups indicated little knowledge about the existence or availability of informal and/or formal programs to link incubators and tenants. For example, there is no formal process for regularly connecting tenants for idea, resource, or “lessons learned” sharing. Many participants realized how little interaction they have with their own tenant neighbors, and how beneficial it would be to connect with them on a periodic basis.

In terms of intra-incubator connections, one comment centered on a successful networking event that included UMBC, Johns Hopkins and TAP incubator tenants. There was some dismay that the event was no longer offered.





A common theme emerged in most of the groups around networking with one another, and with targeted resources, advisors, venture capitalists or others that could help their development process. Many tenants want more proactivity among incubators in setting up a matchmaking function. This would make it easier to find and connect with appropriate people, resources and institutions.

Linkages to marketing, finance and technical resources are in some cases deemed more critical than the physical plant itself.

Access to Capital and Financial Advice

There is a high level of interest in finding more ways to access capital, but there is range of skill and experience among tenants in understanding the capital markets.

One tenant felt, however, that the Internet and information technology (IT) is overwhelming the financial community's interest. Overcoming this is difficult for sectors like biotech that can have a long lead-time. Access to capital resources or development of special capital programs for the biotech industry is a source of frustration, and is not or cannot be addressed by the Dingman Center. Many of the biotech companies see a need for the state to intervene more proactively on their behalf to support the development of their products and companies.

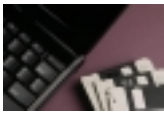
Corporate partnerships were discussed as one strategy to mitigate some of the issues around venture funding. Establishing these partnerships provides levels of critical mass support through the high-risk stages, which then opens the door for other investment alternatives and exit strategies. As the economic conditions have improved, these partnerships seem to be more possible. However, these types of partnerships were generally cited as not coming from Maryland, but outside the U.S. and in some cases other parts of the U.S.

Marketing Support

General marketing and sales support is a key need, industry-specific expertise is critical.

Tenants want help in identifying marketing firms that have expertise in their specific industry/product area. They want to work with marketing firms that have experience in researching, marketing, branding and distributing their type of product or service.





Graduation Support Services

There is little or no programmatic support for making the transition to the next growth level; specialized needs must be considered.

There was not a great deal of focus on this topic, but several indicative comments were made. One tenant who anticipates a move said there was recent support in identifying potential real estate options from a county economic development function. However, there was generally little awareness of a programmatic approach to supporting transitional needs.

Other tenants described a three-phased approach to categorizing the incubator companies so that as they grow, they are given more space and upgraded amenities. They also pay higher, market-level rents, but they are better prepared to enter the commercial environment.

B. IDEAL CONDITIONS

Tenants have many ideas and suggestions on how to improve and enhance overall incubation functions. Several commented on the need for incubator management and others to learn more about the incubation process, and be more cognizant of tenant needs and challenges during growth cycles. This requires an understanding of different industry sectors (fast-growing Internet companies vs. longer-term biotech companies), and the unique market and technology conditions. Suggestions were made to improve the overall communications process within the incubator through face-to-face, regularly scheduled briefings, and by increasing cross-incubator communication through online and published resource directories, networks, and discussion groups.

Business Planning, Management, Operations and Services

Integrate regularly scheduled business reviews with advisors into operations.

Tenants who are part of a systematic, periodic business review process are very positive about the experience. They found the process very beneficial for receiving valuable feedback and for making contacts with substantive and skilled advisors. This type of service receives wide support, and is of great interest to those who are in incubators where this is not available.





Physical Infrastructure

Design the physical Infrastructure to be more reflective of incubator company needs; charge rent based the status of the tenant's growth cycle.

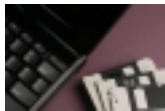
Tenant occupancy rules and build out vary widely with the incubators. Some have two-year limits, others seem to have more flexibility and are in their facility for extended periods of time. Some are provided a "shell" and have to do the build out themselves, which may mitigate any cost savings on the rent.

In general, companies feel there should be more consistency and value in "what you get vs. what you give/pay." Most of these companies have an overwhelming need to manage cash flow and always look for ways to cut costs and improve efficiencies. Rental rates are viewed to be at market level, and finding ways to make them more attractive (half of market rent, for example) was suggested. Some commented that the ideal would be totally "free space" since rent is generally a high line item in the operations budget.

They suggested:

- Establishing a set of standards, in terms of rental rates and occupancy limits. These would match the industry or type of tenant client under consideration to reflect differences in business development cycles. This was of particular concern to the biotech companies who generally feel the two- to three-year window is unrealistic.
- Phasing in a lease/rental process that would increase with the growth and maturity of the company. New entries would have lower rates and get some relief from cash flow pressures, but would ultimately pay market rates as they are preparing to exit the incubator.
- Biotech tenants want more forethought into lab design, including flexibility for expansion and customization, and modest office space. This is a challenge for any building design, but more so for incubators because the types of tenants and future tenants is unknown, unlike a business or government operation. This issue requires research and connection to others in the U.S. and abroad who are grappling with lab design issues. Engaging in a design discussion with "lab people" from different kinds of labs and different locations would be beneficial, particularly in highlighting the changing functional requirements.





Business Services

Establish a consistent suite of business services with measures of performance.

Provide a consistent set of basic services that all startup companies need. These should include centralized mail, phone and fax services, office support (such as a receptionist and some secretarial support), high speed Internet access (T1 connection), copier, shared conference rooms and computer and lab facilities. Some want additional services such as Web site development and Web hosting.

Incubators should, at a minimum, provide a directory of recommended legal, banking, accounting and other services. However, more tenants indicated interest in having a range of on-site expertise available for face-to-face consultation to assist with basic issues like licensing and taxes, and to advise on more complex issues like intellectual property, financing options, valuation and corporate structures.

One tenant suggested that a central group (like TEDCO) set up an affiliation program with service providers who have met certain standards of performance, and then pass discounts onto tenants. In addition to financial incentives, this could save tenants' time in identifying and negotiating certain types of services.

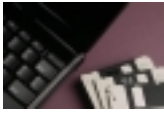
Advisory Support and Assistance

Increase the availability of quality resources in a variety of venues to greatly support the company's growth.

Tenants described a number of important services and delivery mechanisms:

- Directory of recommended resources based on use by other tenants.
- Network of private, public, educational experts that identify tenant company weaknesses or "holes".
- Matchmaking services (preferably on site) to connect startups with pro bono legal and financial advice, and commercial partners; use SCORE or similar services if pre-qualified.
- Mentoring Services to provide more personalized and customized support throughout the company's growth stages.





- Monthly speakers covering marketing, financing, law, technology, intellectual property, human resources, and other issues.
- Web sites (DBED, TEDCO or others) with information about the companies and an easily accessible list of qualified resources.

Advisory or shadow boards of individuals in the business community and other areas of expertise would be very useful. Training on how to select a board and use it would likely be necessary as well.

Unlike public incubators, private incubators often create an advisory board with specialized expertise and proven entrepreneurial talent; they then fill in the companies around that advisory board. This strategy appears difficult for publicly funded incubators, although there could be industry-focused advisors that work with similar industry or product sectors across the incubator network.

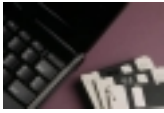
Linkages

Expand linkages to universities, partners, other infrastructure resources at all levels.

Overall, provide infrastructure and processes for greater linkage—informal and formal—to other tenants, entrepreneurs, and university and partner resources. Support a range of activities including bag lunches, speakers, and other networking gatherings for periodic sharing of ideas and resources. One tenant sees a real advantage to a mix of companies at different stages of development in an incubator; this affords sharing of "learning" experiences and advice between and among tenants who have been there.

- Seek close proximity to resources, such as the University of Maryland. Another example is the University of Maryland University College and UMBC sharing locations with the innovation center. This provides easier access and connections to infrastructure, experienced workers and graduate students, and other resources. Future incubator programs should consider the overall ecosystem and how to leverage existing resources, intellectual and human capital, and technology infrastructure for location purposes.





- Develop a network of resources—high quality, credible industry experts—that will help get the companies to the next level. Provide information and connections about special programs such as PriceWaterhouseCoopers pro-bono advice during pre-marketization period.
- Fast Pitch type programs that connect to and provide pro bono legal advice
- Establish greater linkages to potential workers and interns. Use a communications strategy that promotes the incubator companies to link to potential employees. Establish linkages with colleges and universities to conduct scheduled part-time job fairs that will give access to entry level workers at lower costs.

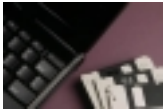
Access to Capital and Financial Advice

Foster more understanding of financial support and access to financial resources relative to company growth cycles and maturity levels.

More training and access to the right kinds of financial information and resources would be a great benefit to tenant companies. Some suggestions are:

- Assist entrepreneurs with developing financial strategies and financial statements.
- Establish a process or program that generates greater access to CFOs who have experience with emerging companies and can work through the different growth cycles. This includes working with venture capitalists and going public.
- Assist entrepreneurs in preparing for venture capital and learning about various processes including due diligence, valuation, IPO and exit strategies.
- Develop programs to connect incubator companies with funding resources, and educate them on how to deal with the various segments of the capital markets as they grow and need different levels of funding.
- Establish loan guarantee programs modeled after Silicon Valley Bank and Transamerica; use private sector participation as a draw for state support.





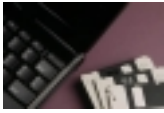
- Develop a pool of “educated” bankers that understand and support the needs of emerging companies whose financials and business models are typically different from more traditional businesses.
- Use funds from the sale of incubator successes to create an enterprise fund and increase the investment capital pool; introduce flexibility in criteria for matching partners.
- At the mezzanine level, look at loan guarantees, which leverage the state’s AAA credit rating; guarantee loans for build-out, which would help companies making the transition from the incubator that need leverage in dealing with landlords on new space requirements.
- Put more money and higher caps into the Maryland Industrial Partnership grants. Facilitate the expansion of this program to other universities and institutions, such as NIH and other federal labs. The infrastructure is in place to manage more extended MIP programs and the federal MIPS program. This money could support driving more collaboration between the companies and the labs, which is a way to move these kinds of partnerships forward and pull more of the innovation in the labs and into the market.
- Establish a centralized tracking mechanism for company funding requirements to assist in preparing and planning for the help that is going to be needed.
- Increase overall awareness (via promotion) and connection to various sources of funding including the angel networks and PIN. Also develop a way of showcasing to those funding sources the products under development at the incubator companies. Use the Internet (DBED Web site, for example) to showcase the incubator tenants, but also coordinate networking functions for face to face interactions.

Marketing Support

Host a full range of marketing support resources from research to sales strategies.

Tenants discussed the need for help across the board in developing sales and marketing plans. They expressed a need for help in:





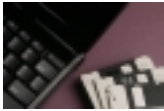
- Market research.
- Creating an identity and brand.
- Helping to select the “right” firms to select, particularly for their product or services.
- Sales strategies, distributions, and closing strategies.
- Public relations and communications specific to their industry sector.
- Web site development and integration into a marketing plan.

Graduation Support Services

Offer specific graduation services to help the companies and provide them an increased incentive to stay in Maryland.

Help facilitate the transition to an independent function by assisting with creation of a migration plan, and identification of steps, resources and financial requirements. Identify a network of resources such as real estate advisors, facilities/office managers, network design and implementation resources to help with the identifying and negotiating for space and implementing a move.





PRIORITY ACTIONS

Overall Strategy

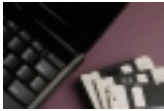
This is a summary of the overall priority actions that were either directly suggested or inferred from the tenant companies' comments.

- Develop an overall systemic approach; coordination is essential for increasing quality and quantity of services, scalability of the programs and resource/knowledge sharing across the network of companies and individuals.
- Retain the autonomy of the incubators, but create a more connected community across and between individuals, companies and incubators.
- Develop a holistic approach that identifies the elements and services needed across the whole life cycle of a new company. Look at the models being employed by the private sector, such as Idea Labs, that bring the capitalization throughout the development cycle to support the research, engineering, pre-marketing and marketization phase. Also consider other advisory resources that accelerate product entry in the market.
- Develop strategies and programs that support the unique needs of different industries, particularly for companies whose business development cycle is beyond two or three years.
- Enhance incubator management and other advisory resources that understand the incubation process and the challenges of different business cycles. They should be capable and available to provide guidance throughout the process.

Measures and Metrics

- Develop standardized measures for success across incubation programs; adapt the measures to reflect economic realities and shifts; communicate more clearly the expectations between and among all stakeholders.
- Consider measures and metrics that increase levels of service and accountability of incubator programs to tenants. These in return provide tangible return to the coordinating body or state.





- Consider the pros and cons of economic development models that drive for quantity of jobs created vs. quality of jobs, and the impact they have on the types of companies attracted to the public incubator program; consider salary levels as an alternative in the overall metrics, not just quantity of jobs.
- Look at the overall aggregation of new jobs across the tenant companies and graduates. This reflects the true employment and economic value created by the incubator network, not just at the individual companies. Across the U.S. small companies are creating the vast majority of jobs, and the incubator process should be valued for its role in feeding new companies and employment into the economy.

Business Review Process

- Develop and implement business review practices that are benchmarked across incubators and include regular schedules and appropriately skilled advisors.
- On a periodic basis, establish a process to monitor progress of the companies. This practice would support a continuous improvement process for overall program enhancement, and provide an additional level of feedback and attention for the companies. The standardized methodology of the Japan Labor Department is a good example.

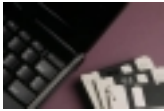
Services

- Develop a standard suite of services that all incubator companies can expect to receive.
- Develop an understanding of "special" needs of industry sectors/companies, and design support accordingly.
- Develop an overall Incubator Service Directory and orientation program so that all services are identified and access to those resources is easily and clearly understood.

Advisory Support

- Develop an incubator network-wide advisory services strategy; consider including a system-wide program that includes various forms of face-to-face advisory counseling, including periodic speakers, onsite advisors, the use of teleconferencing facilities and other technology; this will extend the reach and





-
- facilitate implementation. Also create complementary Web-enabled capabilities for enhancing the advisory network and a calendar/schedule of events.
 - Create a startup business roadmap that identifies types of assistance needed or desired at different development cycles; map a suite of advisory services to that roadmap so that entrepreneurs can find the appropriate level and type of assistance. For example, a company that is new and driven by scientists may not have business or marketing savvy, so it needs to know when and how to access those types of services.
 - Develop a directory (online and offline) of advisory services that are available to incubator tenants; provide detailed information on expertise areas, cost/pro bono, credentials, industry expertise and references.

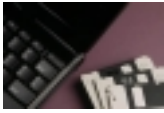
Linkages

- Develop an overarching program that informs and connects the different incubators and incubator managers and tenants across the state.
- Establish an intra and inter-incubator communications forum and process to exchange information between and among incubator tenants in an incubator, and among tenants across state incubators. This will also provide virtual and physical forums.
- Create a process to more easily link tenants to industry, universities, and economic development and partnership resources.
- Develop a pre-screened, preferred vendor listing or affiliation program with organizations with certain levels of performance and pricing advantages.

Access to Capital & Financial Advice

- Develop a communications and or demonstration process that connects the incubator companies with sources of capital. Use venues like the Mid Atlantic Venture Association (MAVA) to begin the awareness-building process for companies that might not be ready for MAVA investors but are on the horizon. Establishing these kinds of connections, relationships and exposure would increase companies' understanding and effectiveness in working with the investment community.
- Develop a communication process and infrastructure that connects tenant companies to earlier-stage funders, angels, and PIN groups in the region and around the U.S. Although it appears that many angels prefer investing “close to





- home,” some have interests in particular industry sectors; facilitating connections to those individuals or groups outside of the state would be most useful.
- Encourage the state or other agencies to continue providing seed funding for early-stage companies. In return, companies could agree to stay in the state for a period of time, or make other concessions for the up-front capital. This practice is increasing across the states.

Public Relations and Communications

- Develop an overall communications strategy and public relations campaign that includes a significant web component.
- Use a communications program to highlight the innovation, products/ services, and people in the incubator system; create greater awareness of the companies in the incubation process to assist them in getting access to funders, experts related to their industry, workers, strategic alliances and customers.
- Highlight the following with a more systematic approach:
 - News of particular tenants (funding rounds obtained, new product/service announcements, acquisitions, growth statistics.
 - News of new companies joining the incubation process.
 - News of graduates and their successes ("Celebrate Success").

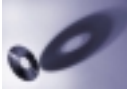
Transition and Graduation Programs

Develop a graduate program that helps the tenants’ transition into the next phase of their growth. Included should be assistance with relocation, regulatory issues, facilities planning and set up.

Hagerstown incubator provided some unique insight given its location "way outside of the beltway."

- Elevate the communication infrastructure within the community; state-of-the-art connectivity is a requirement to attract the technically skilled workforce to the area; those workers expectations are to have access to high-speed interconnectivity and other technology infrastructure.
- Increase air transportation facilities that make it convenient to connect to vendors, strategic partners and venture capitalists; “out of the way” incubators described the need for transportation solutions to give same advantage as those closer to major airport facilities.





INCUBATOR FOCUS GROUP STUDY

List of Attendees

NAME & COMPANY	INCUBATOR
Debra Lynn Shapiro <i>Integrated Technology Solutions, Inc.</i>	UMBC
Arnie Schuster <i>DocuTrac, Inc.</i>	TIC Hagerstown
James W. Wolfe <i>DVF Corporation</i>	TIC Hagerstown
Marshall Doty <i>OpSearch, Inc.</i>	TIC Hagerstown
Vincent Hellane <i>d'vinci Interactive</i>	TIC Hagerstown
Alan Sullivan <i>Name Engine</i>	TIC Hagerstown
David Fields <i>Integrated Systems Design, Inc.</i>	TIC Hagerstown
Curtis Bachtell <i>Extra Sensory Productions</i>	TIC Hagerstown
Lauretta Carroll <i>Legacy Press</i>	TIC Hagerstown
Bryan Davis <i>TECCO, Inc.</i>	MD TDC
Paul Silber <i>In Vitro Technologies</i>	UMBC
Leye Aina <i>Epitaxial Technologies, LLC</i>	UMBC
Brian Lippford <i>Key Technologies</i>	MD TDC
Melvin Klegerman <i>Mid-Atlantic Biomedical Research Laboratories, Inc.</i>	TAP
Ned Tillman <i>Columbia Technologies</i>	UMBC
Michael Raphael <i>Direct Dimensions, Inc.</i>	UMBC
John Burke <i>University Pharmaceuticals</i>	BARD
James Wagner <i>Chromatin</i>	UMBC





Incubator Focus Group Study
List of Attendees (continued)

NAME & COMPANY	INCUBATOR
Brian Werner <i>Web-on-Site</i>	ETC
Christine Copple <i>NeuralSTEM</i>	TAP
Larry Liu <i>Immuno-OncoGenomics, Inc.</i>	TDC
David Vigor <i>Galencia Pharmaceuticals, Inc.</i>	MTDC
Alan Penn <i>Alan Penn & Associates, Inc.</i>	TAP
John Compton <i>GeneDx</i>	MD TDC
William Nelson <i>Tetracore LLC</i>	MD TDC
Prabhat Garg <i>ProBiotix, Inc.</i>	BARD
Carl Burnett <i>Homequest Network</i>	TAP
Bruce Montgomery <i>Syntonic</i>	Howard County



INCUBATOR QUICK SURVEY MARCH 2000

BUSINESS PLANNING, MANAGEMENT & OPERATIONS *(high, medium or low priority)*

	HIGH	MEDIUM	LOW
Help with business basics (developing business plans, pro formas, etc.)	14	9	4
Accounting / financial management	9	8	10
Human resources / personnel development and training	7	12	7
Business management processes / customer assessment service / inventory / MIS	3	12	11
Management team development	8	11	8
Comprehensive business training programs	5	9	10

SERVICES

Shared administrative / office services	15	8	5
Internet access	20	3	2
Specialized equipment / facilities (fume hood, computers, fork lift, kitchen); equipment leasing	11	7	8
Child care / services	0	6	18

ADVISORY SUPPORT AND ASSISTANCE

Shadow boards / mentors	15	8	2
Loaned executive to act in management capacity	7	11	7
General legal services	7	12	6
Advice on regulatory compliance	11	7	7
Federal procurement assistance	10	8	7
Intellectual property management	11	9	5
Assistance with e-commerce	7	9	8
International trade assistance	6	10	8

LINKAGES

Linkages to strategic partners (e.g., co-bidding, marketing collaborations, joint selling or distribution arrangements, subcontract or co-provider arrangements, research and development contracts, beta test sites, design collaborations)	12	9	4
Linkages to higher education resources (e.g., student interns, faculty advisors, specialized lab facilities)	13	7	5

ACCESS TO CAPITAL & FINANCIAL ADVICE

Linkages to angel or venture capital advisors	18	5	1
Help in accessing specialized non-commercial loan funds / loan guarantee programs (revolving loan funds, equity pools, microloans, receivables, etc.)	16	7	2
Help in accessing commercial bank loans	12	5	8

MARKETING SUPPORT

Marketing assistance (advertising, promotion, market research)	8	13	4
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PRODUCT DEVELOPMENT

Commercializing technology	6	9	10
Assistance with product design and development practices, process and technology (CAE, CAD)	4	7	14

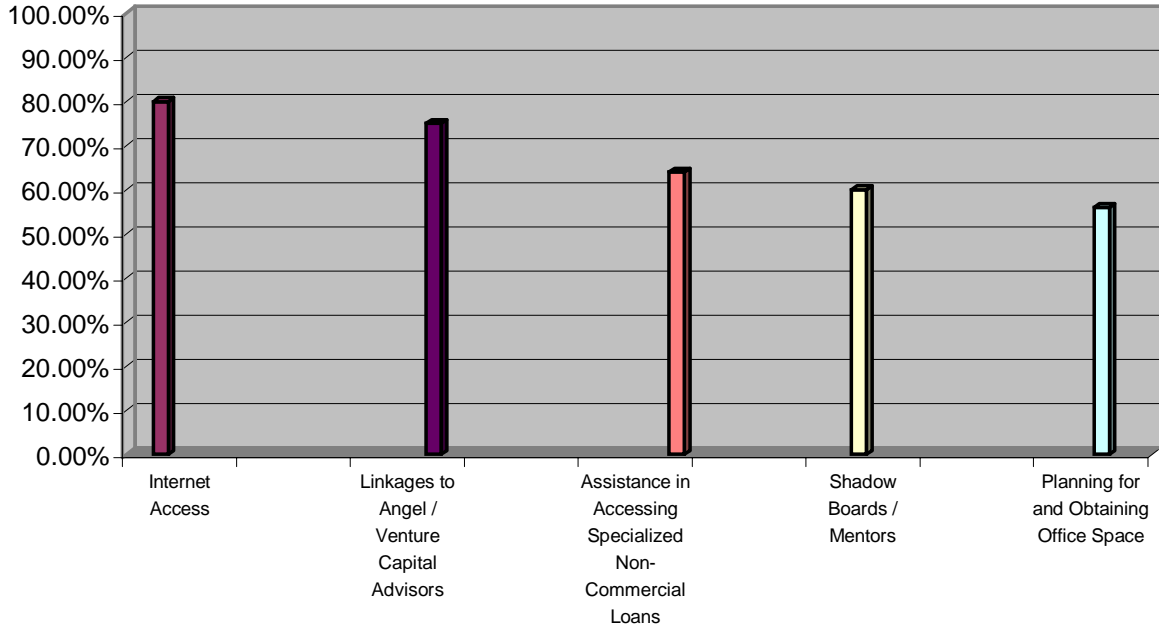
GRADUATION SUPPORT SERVICES

Planning for and obtaining office space, office design and lease negotiation	14	10	1
Support in obtaining furniture and office equipment and supplies	4	9	12
Support in obtaining office managerial and administrative support	4	11	10
Other (specify): <i>Lab Space & Economic Development Assistance</i>			

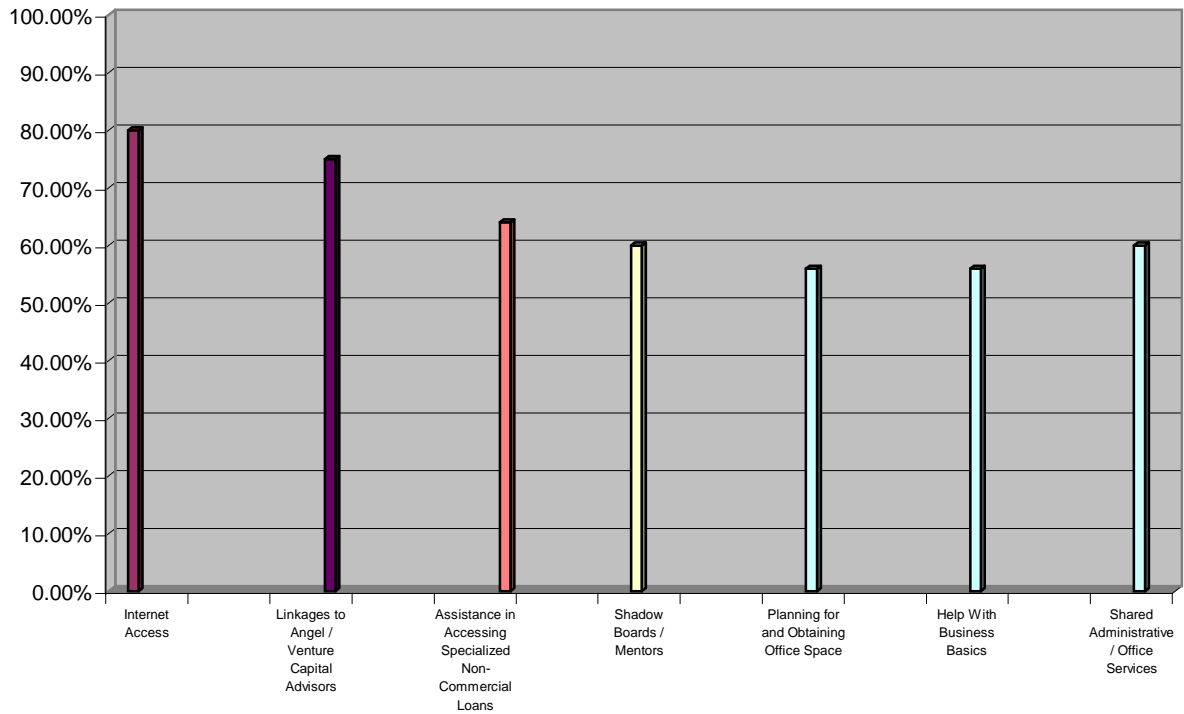
ARE YOU A TENANT?: 24 YES 1 NO

ARE YOU A GRADUATE?: 2 YES 21 NO

Top 5 Highest Priorities for Incubator Companies



Top 7 Highest Priorities For Incubator Companies



Internet Access 80%

Linkages to Angel / Venture Capital Advisors 75%

Assistance in Accessing Specialized Non-Commercial Loans 64%

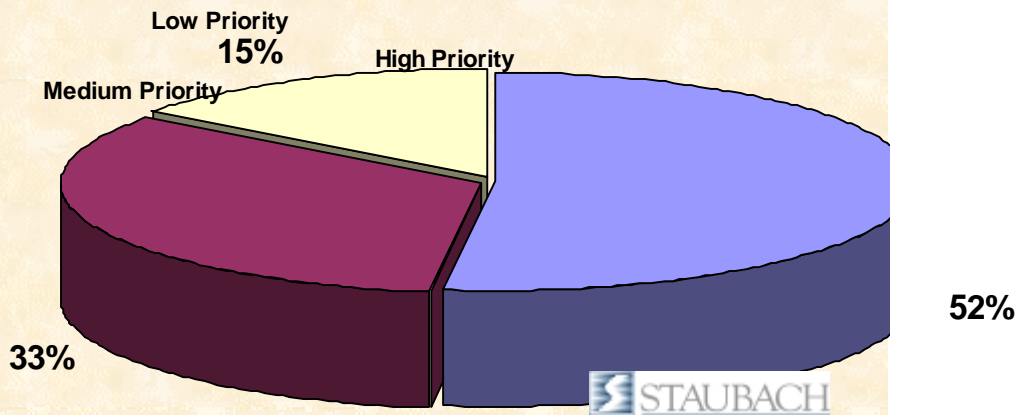
Shadow Boards / Mentors 60%

Planning for and Obtaining Office Space 56%

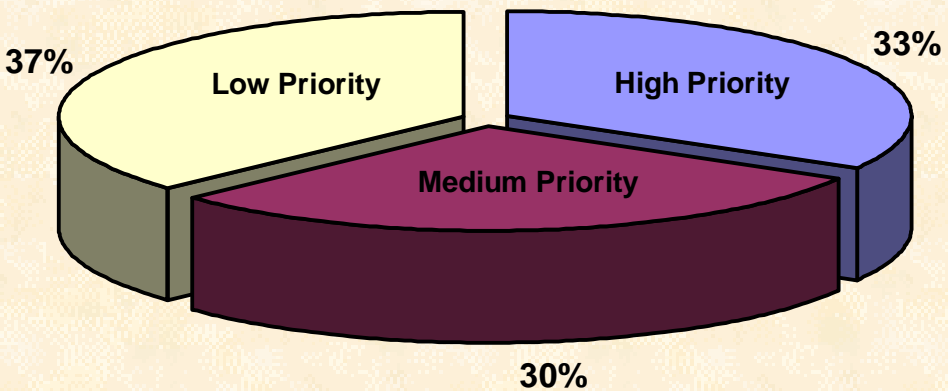
Help With Business Basics 56%

Shared Administrative / Office Services 60%

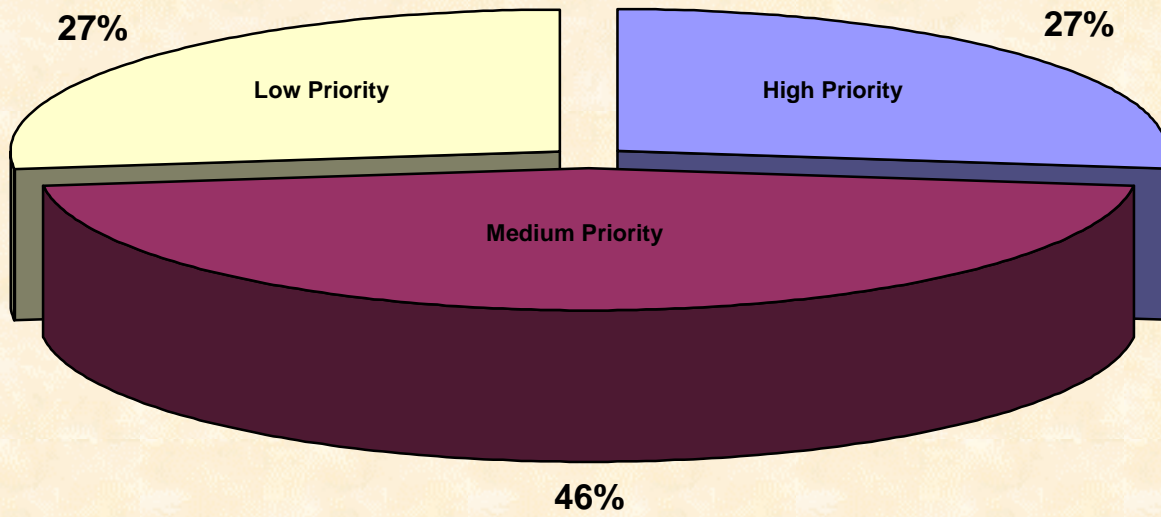
Help With Business Basics



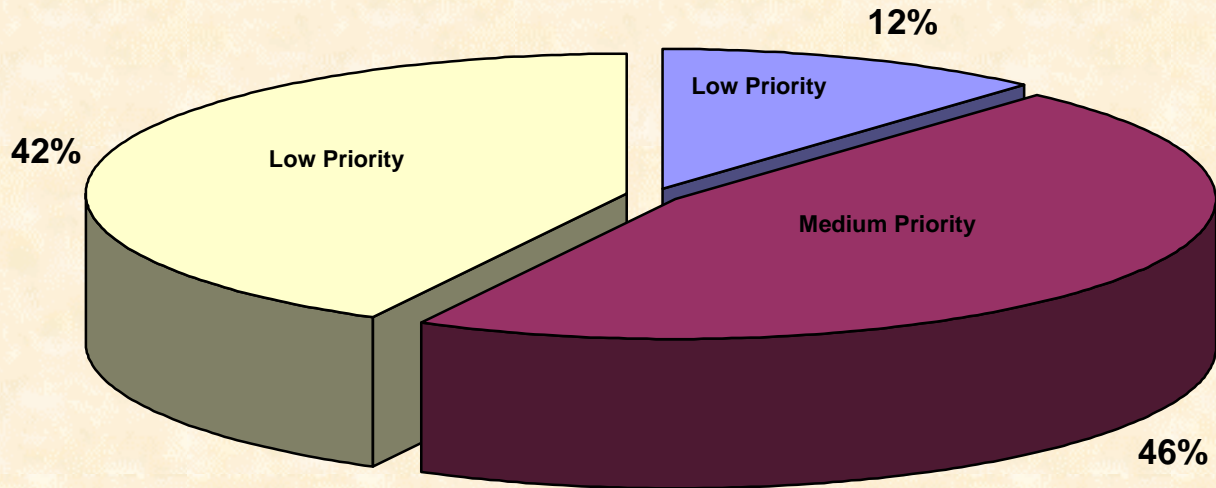
Financial & Accounting Management



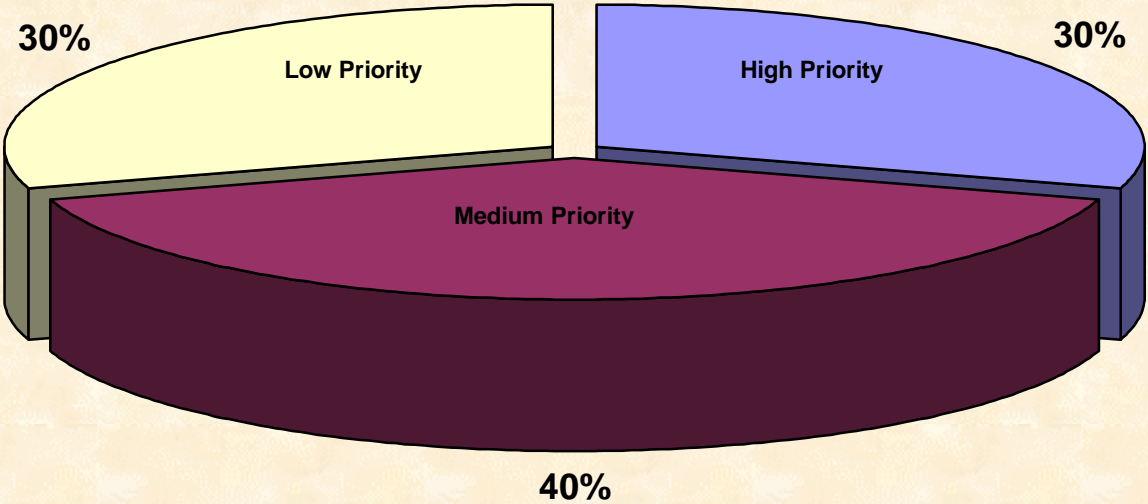
Human Resources & Personnel Development



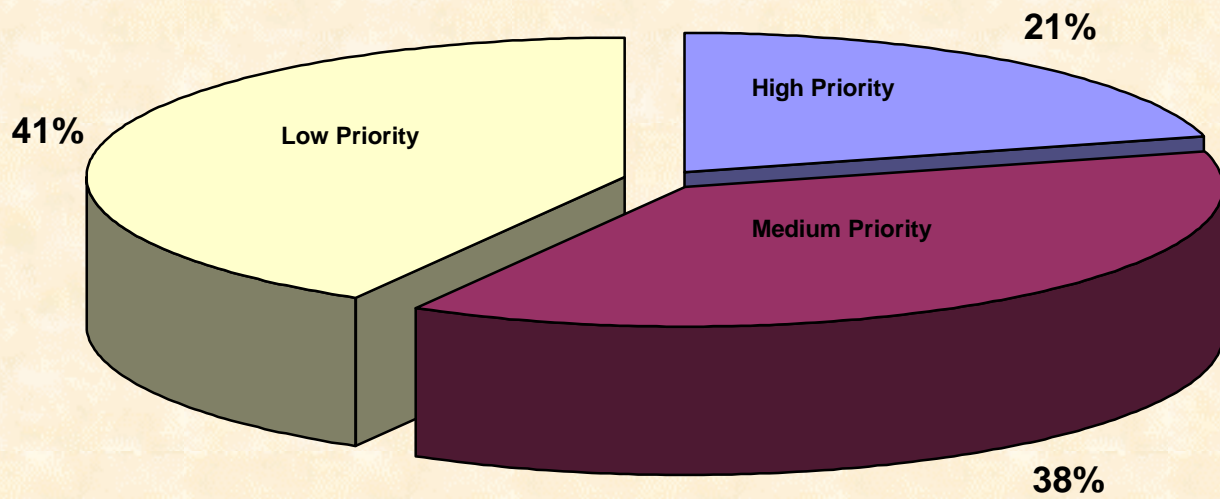
Business Management Processes



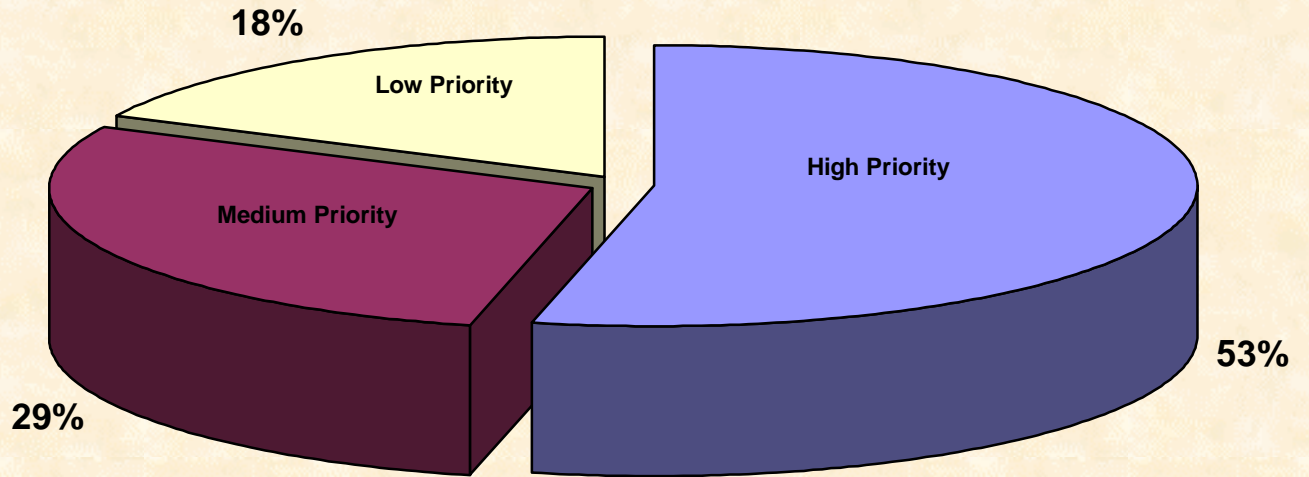
Management Team Development



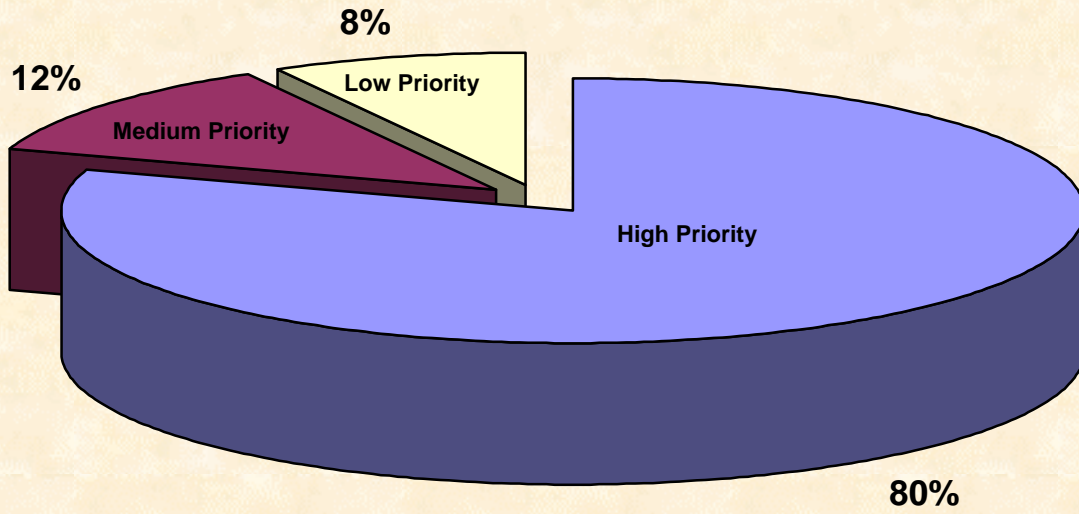
Comprehensive Business Training



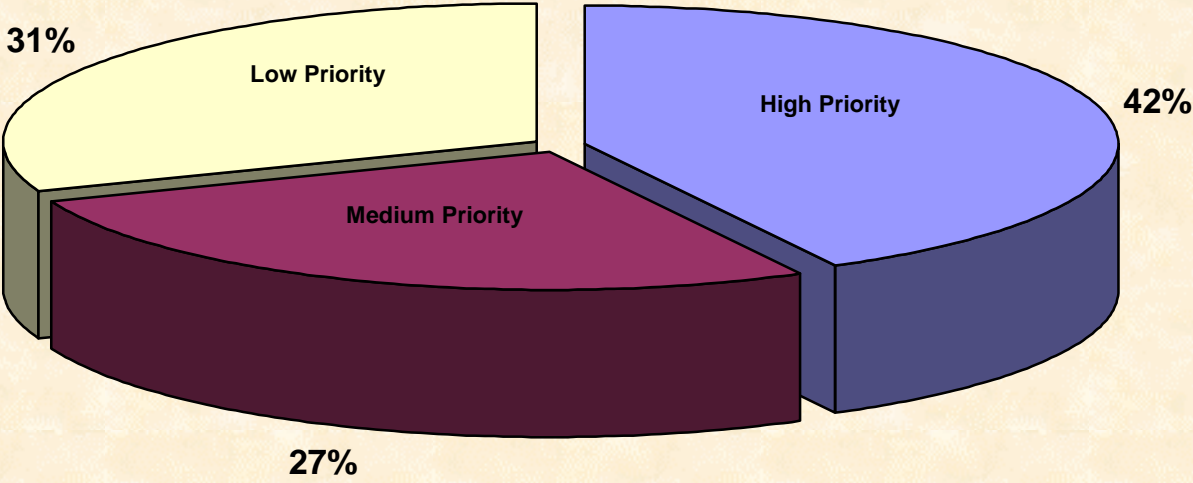
Shared Administrative / Office Services



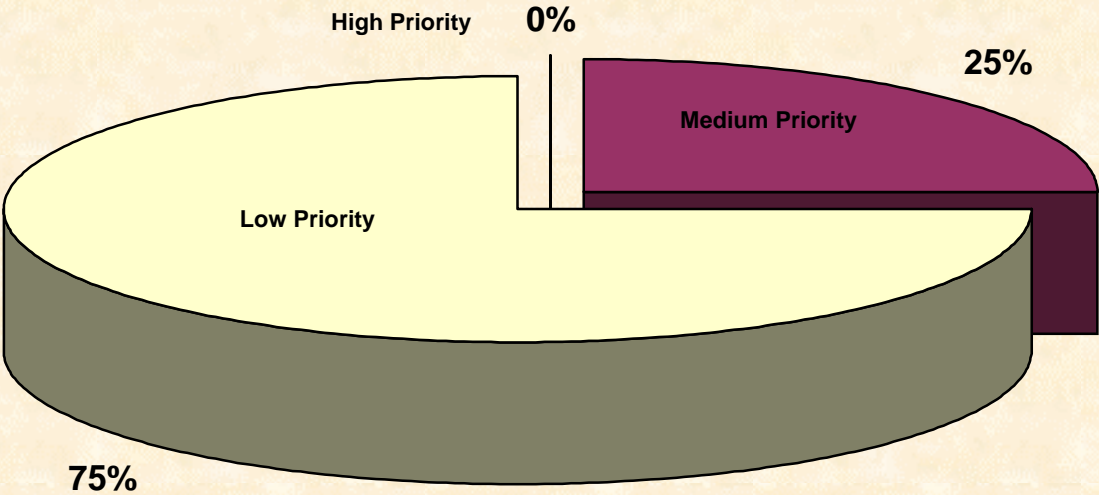
Internet Access



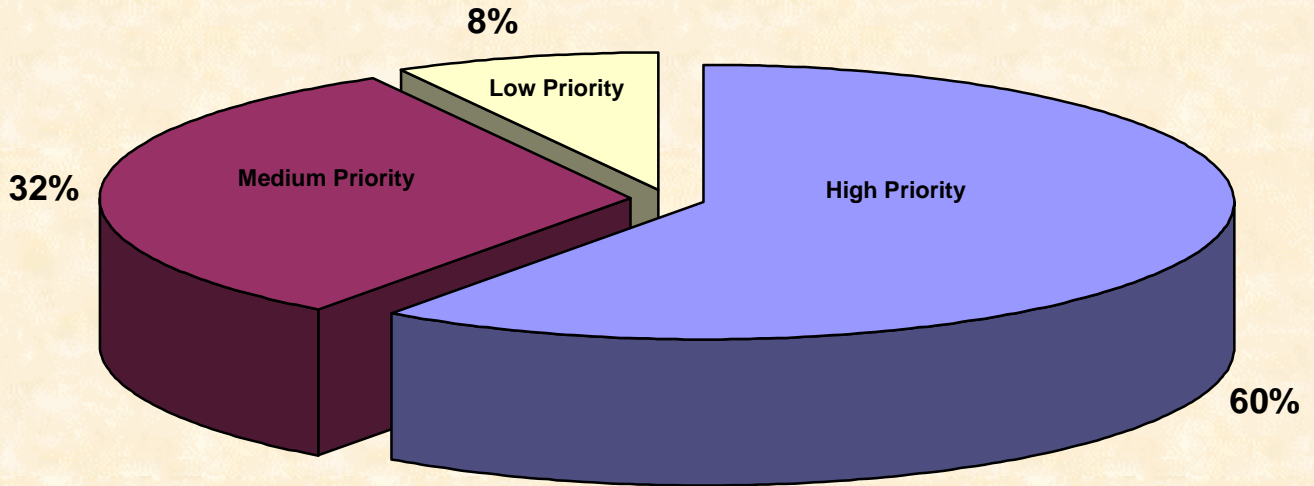
Specialized Equipment / Facilities



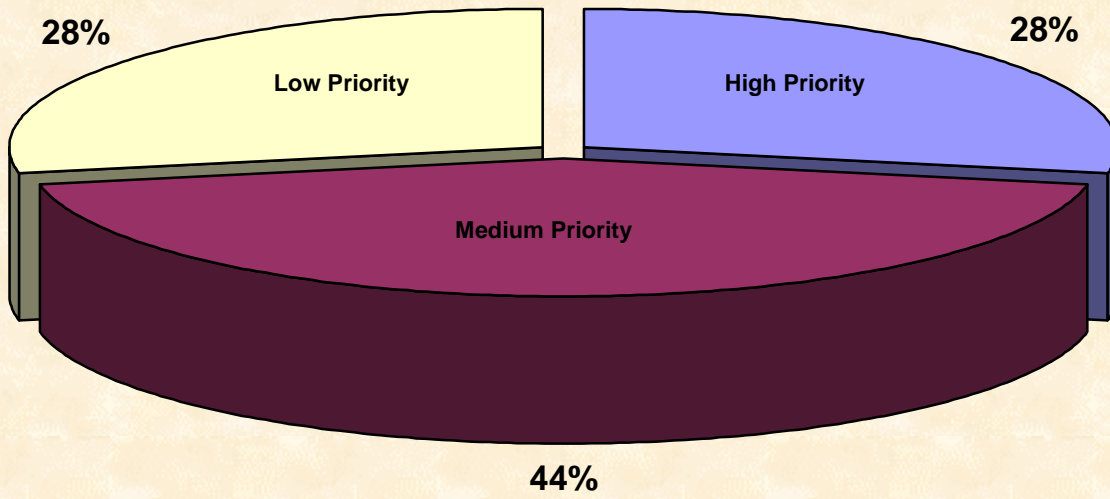
Child Care / Services



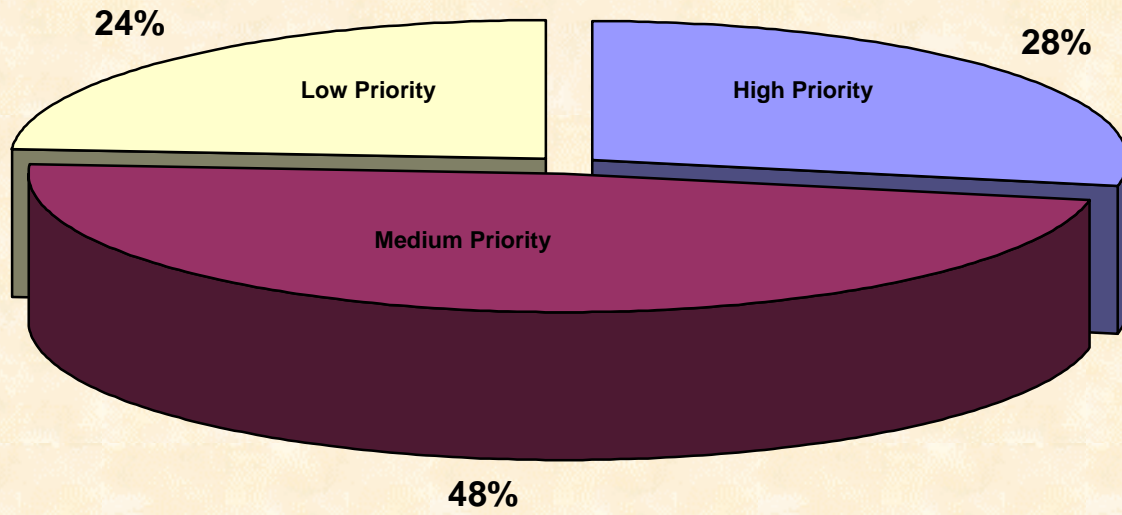
Shadow Boards / Mentors



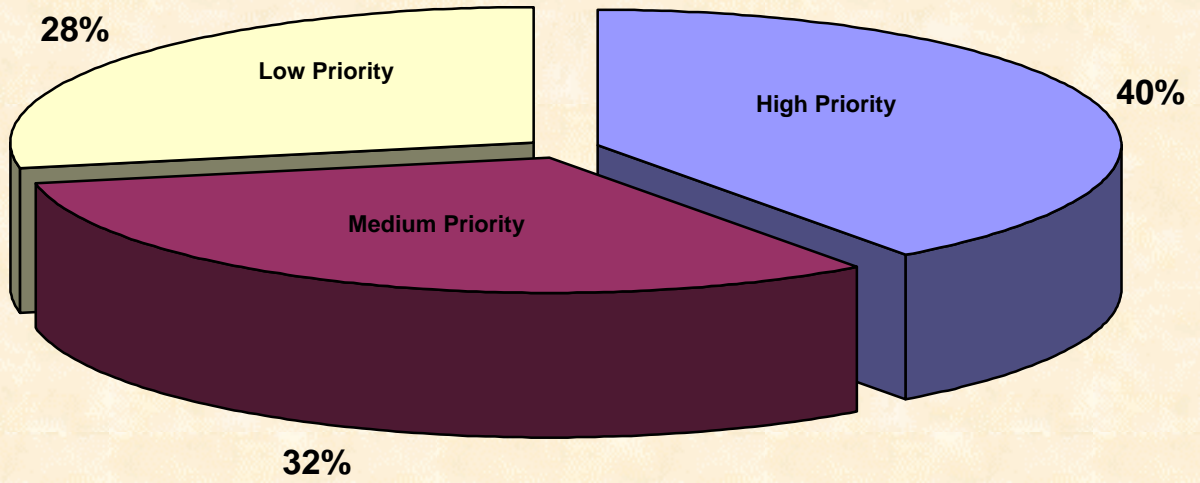
Loaned Executive In Management Capacity



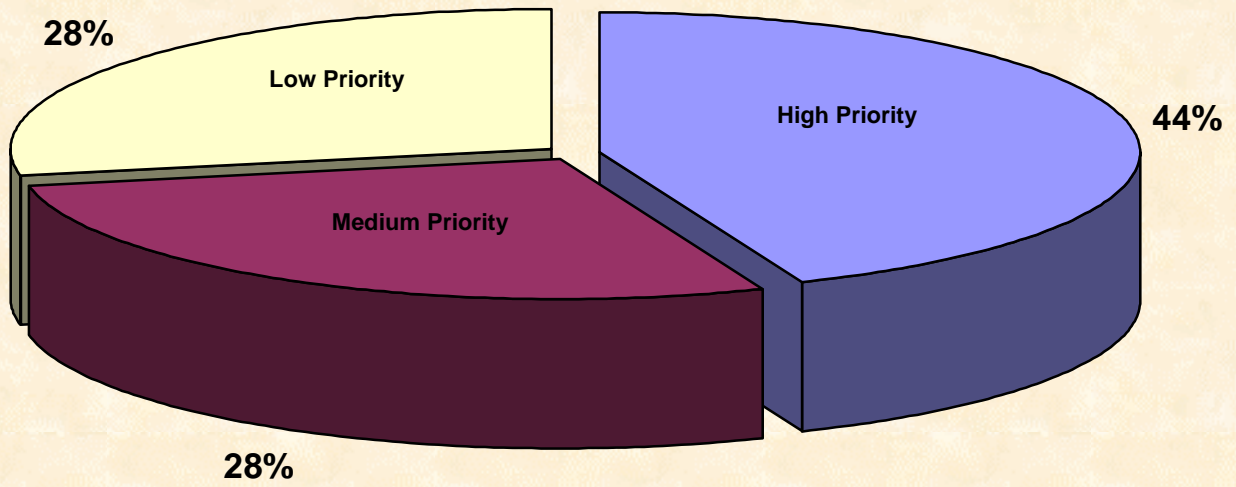
General Legal Services



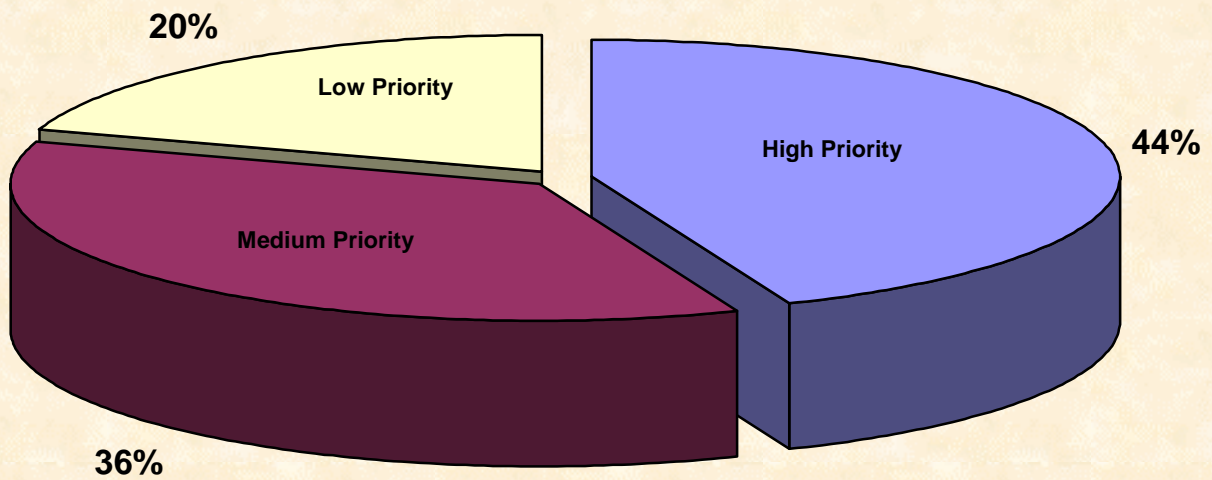
Federal Procurement Assistance



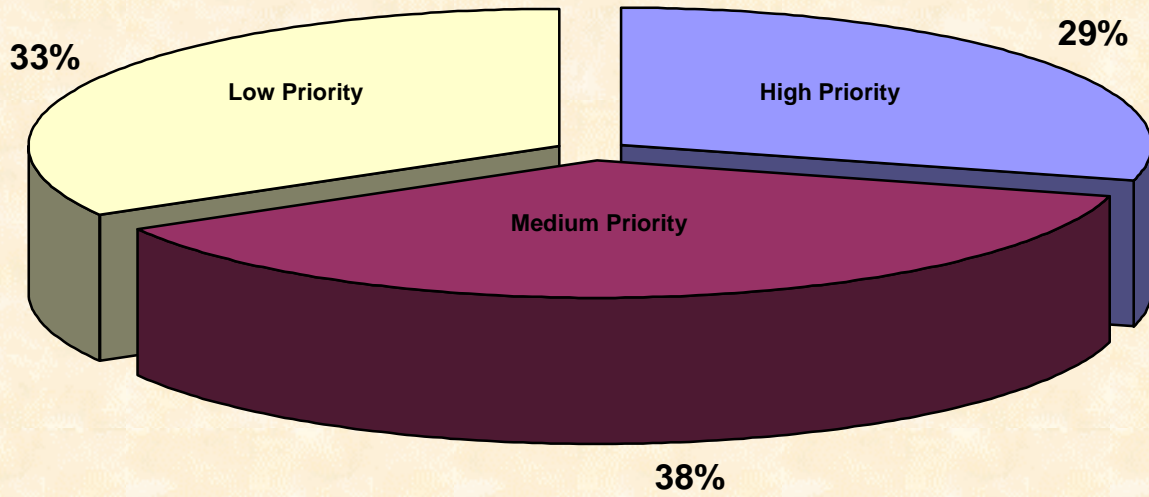
Advice On Regulatory Compliance

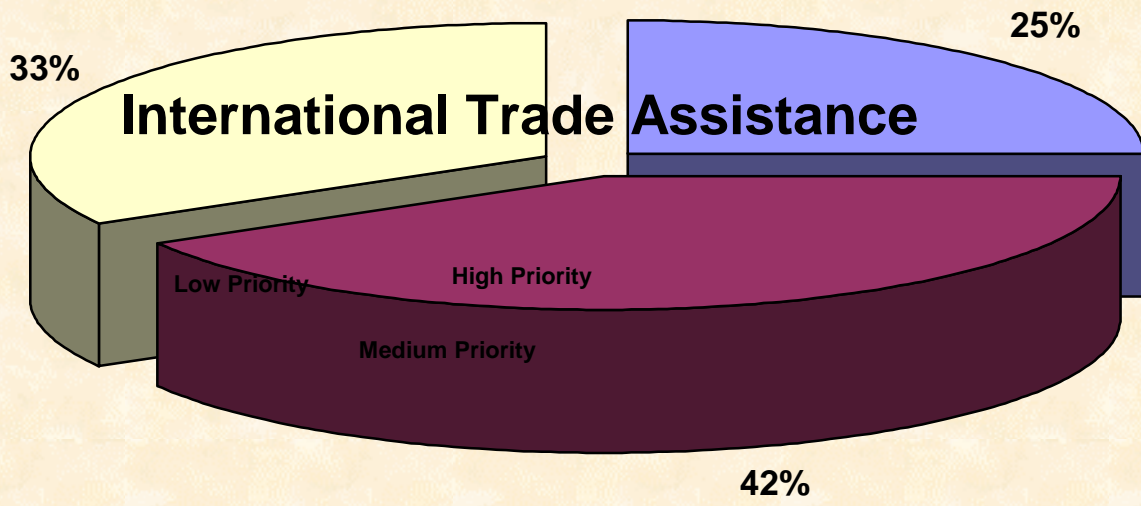


Intellectual Property Management

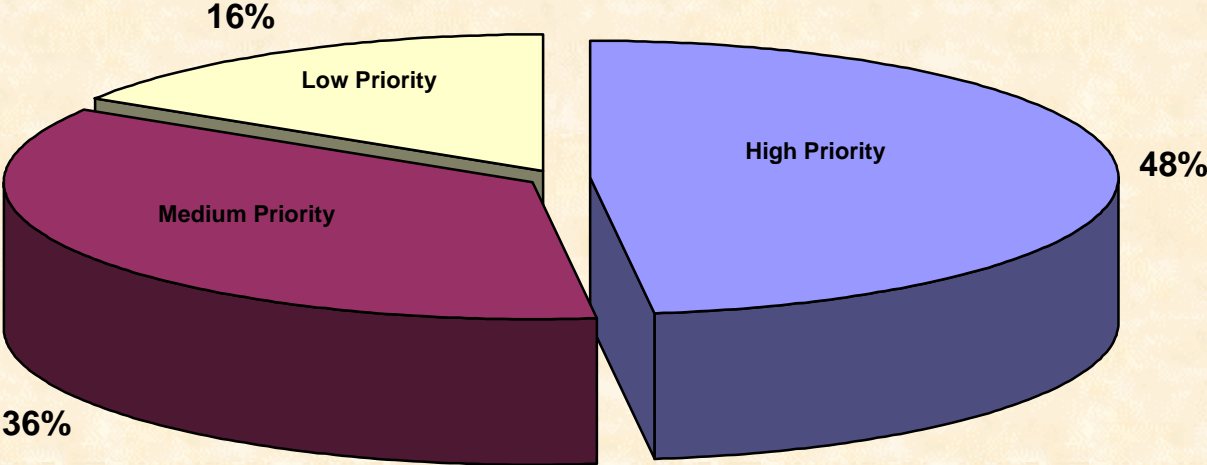


E-Commerce Assistance

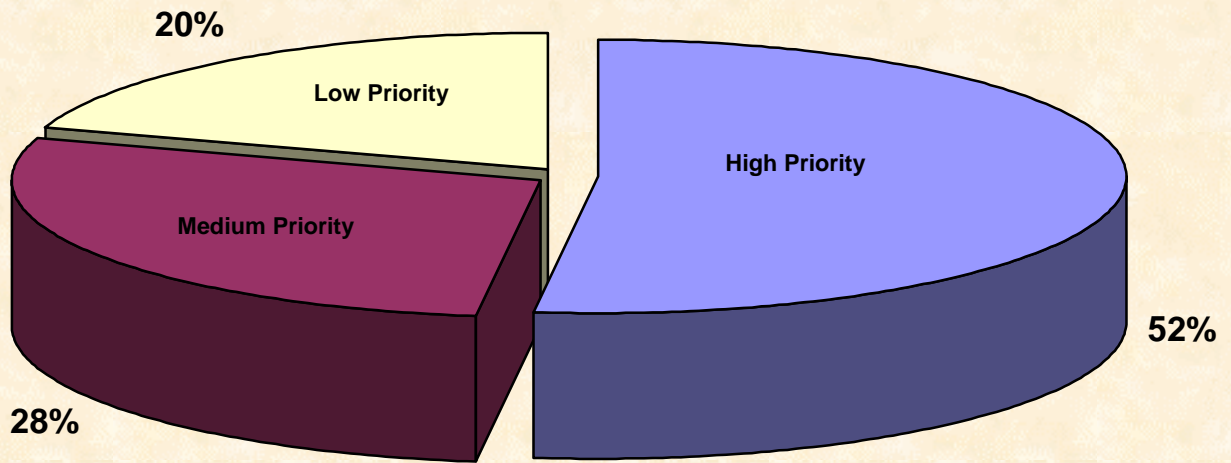




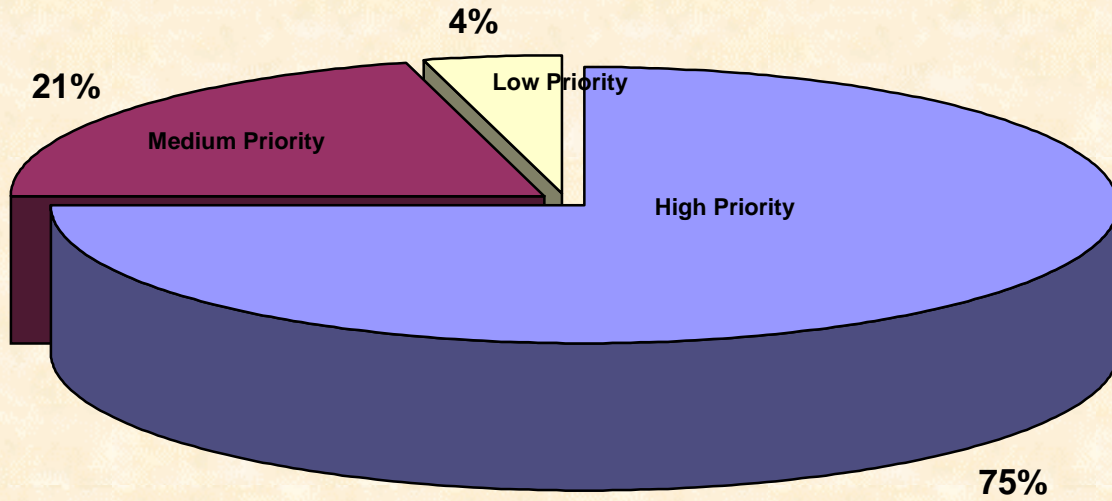
Linkages To Strategic Partners



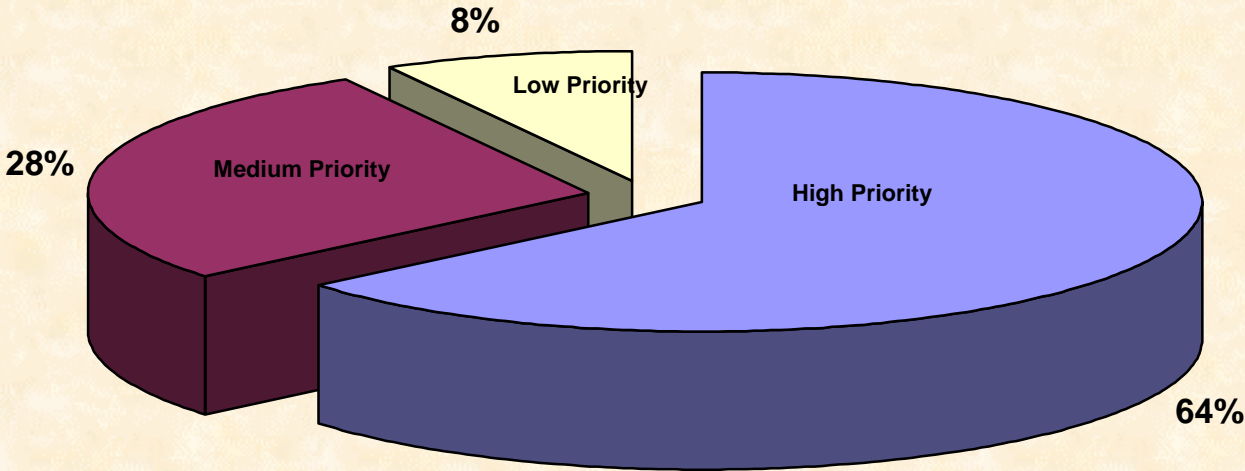
Linkages To Higher Education Resources



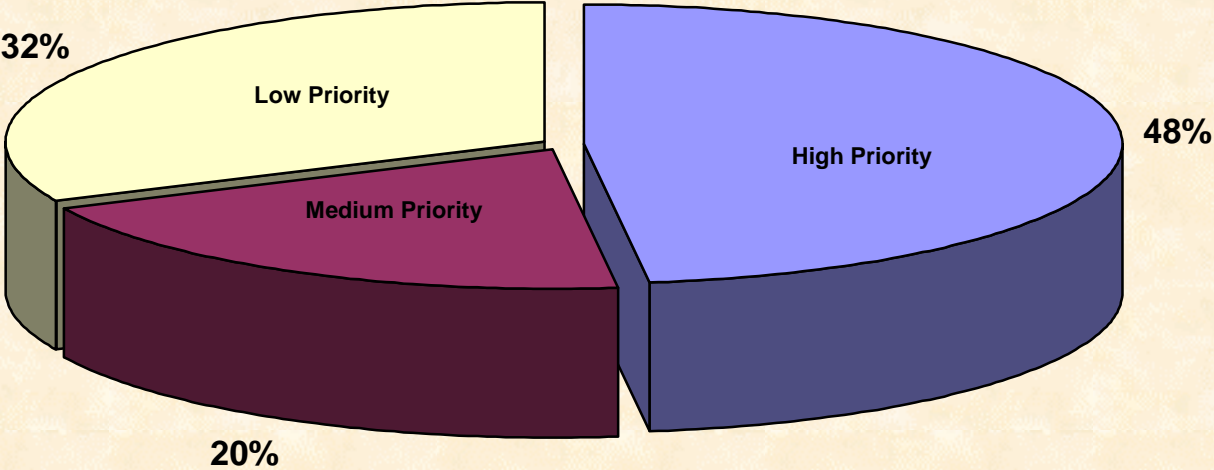
Linkages To Angel Or Venture Capital Advisors



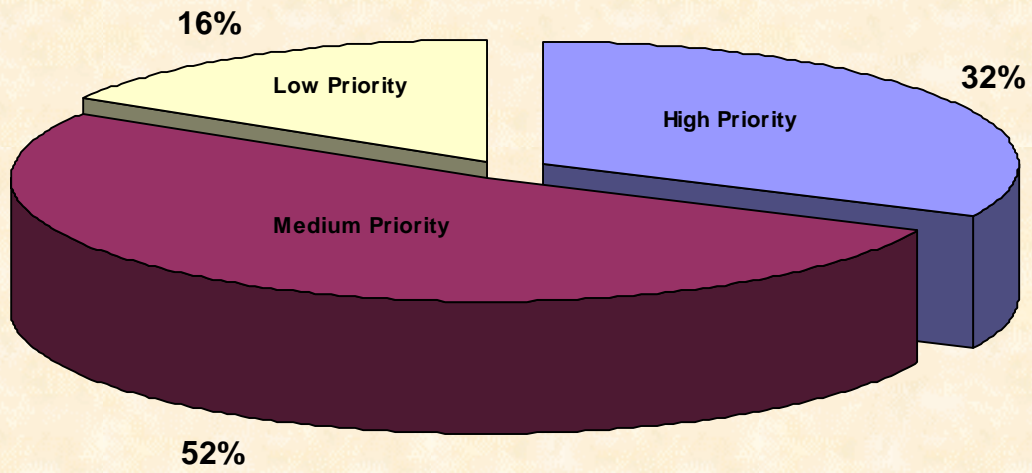
Help In Accessing Specialized Loans



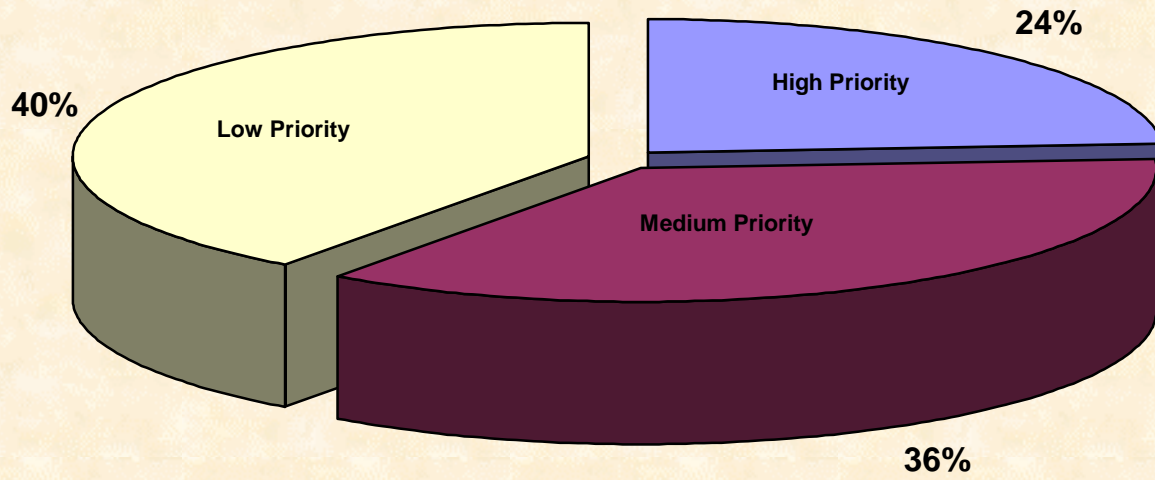
Help In Accessing Commercial Bank Loans



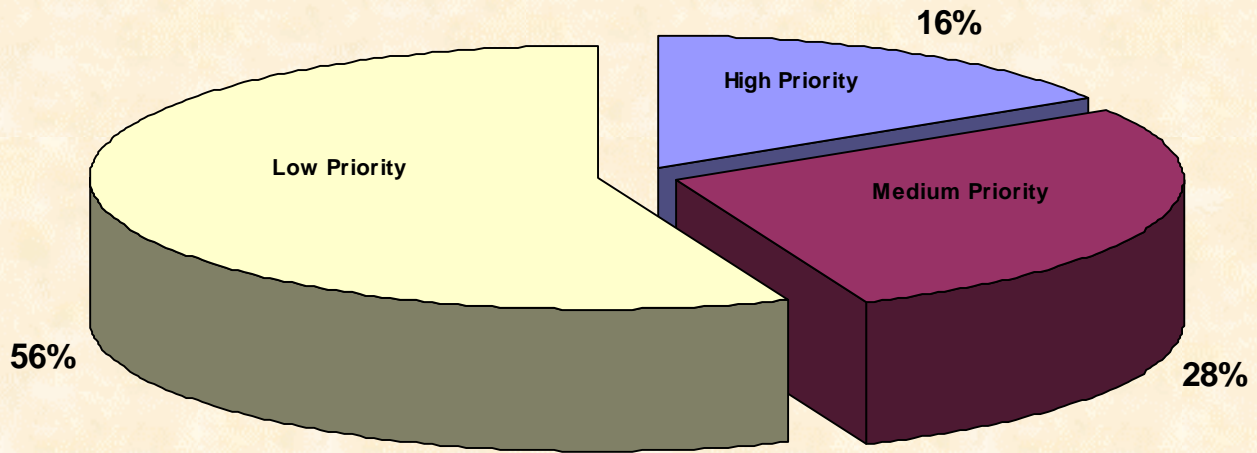
Marketing Assistance



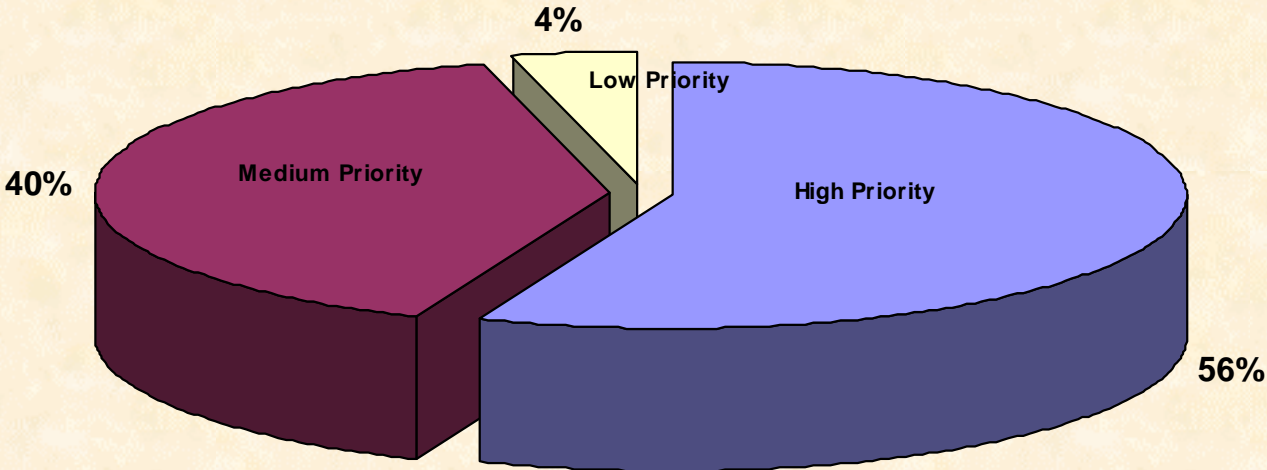
Commercializing Technology



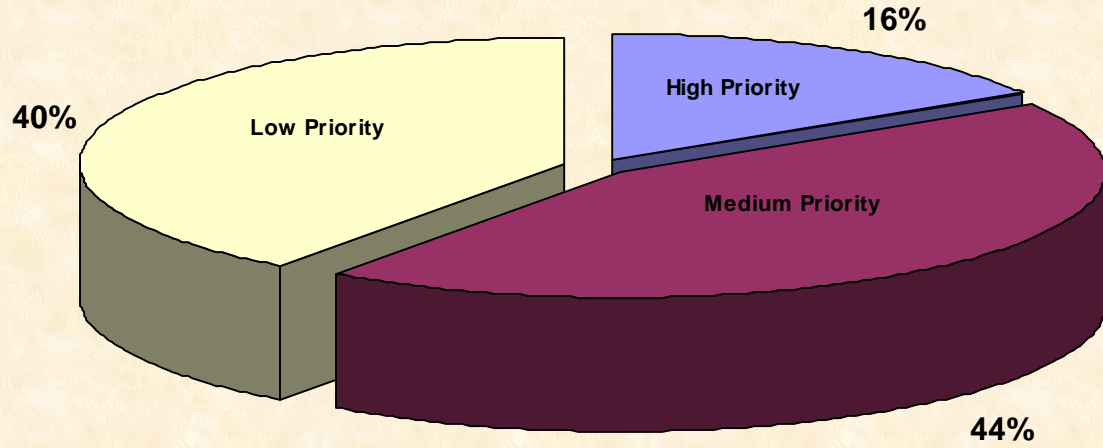
Assistance With Product Design & Development



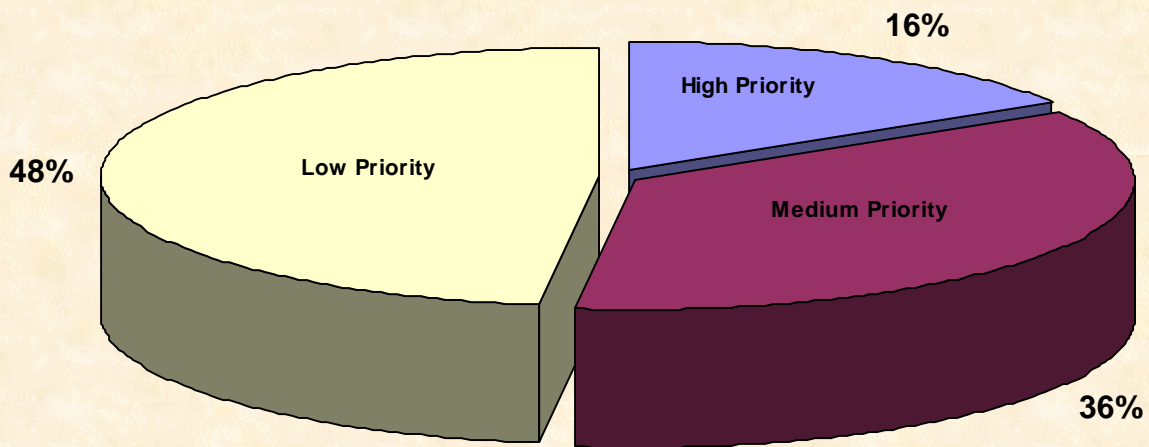
Planning For & Obtaining Office Space



Obtaining Managerial & Administrative Support



Obtaining Furniture & Office Equipment



FAX BACK / RSVP FORM
Focus Groups for Incubator Tenants

Please return this form via facsimile at (703) 448-6685
or via e-mail at mmurphy@staubach.com

NAME: _____

TITLE: _____

COMPANY: _____

ADDRESS: _____

PHONE: _____

FAX: _____

E-MAIL: _____

INCUBATOR NAME & LOCATION: _____

I WILL BE IN ATTENDANCE

I WILL BE UNABLE TO ATTEND

<u>Session Date</u>	<u>Time</u>	<u>Please Select One Location</u>	
Tuesday, March 21 st	8:00 a.m. – 10:00 a.m.	Pooks Hill Marriott	<input type="checkbox"/>
Thursday, March 23 rd	8:00 a.m. – 10:00 a.m.	Greenbelt Marriott	<input type="checkbox"/>
Tuesday, March 28 th	11:30 a.m. – 1:30 p.m.	Hagerstown	<input type="checkbox"/>
Wednesday, March 29 th	8:00 a.m. – 10:00 a.m.	UMBC	<input type="checkbox"/>

Continental Breakfast or Lunch Will be Served at Each Session

.....

If you have any questions please contact:

Cathy Lange - Vice President, Innovation: (703) 287-0469 or cathy_lange@staubach.com

Michelle Murphy – Administrative Assistant: (703) 448-3555 or mmurphy@staubach.com

**INCUBATOR *QUICK* SURVEY
MARCH 2000**

SERVICE/ASSISTANCE Select high, medium or low priority (mark with X)	HIGH	MEDIUM	LOW
BUSINESS PLANNING, MANAGEMENT & OPERATIONS			
Help With Business Basics (Developing Business Plans, Pro Formas, Etc.)			
Accounting / Financial Management			
Human Resources / Personnel Development / Training			
Business Management Processes / Customer Assessment Service / Inventory / MIS			
Management Team Development			
Comprehensive Business Training Programs			
SERVICES			
Shared Administrative / Office Services			
Internet Access			
Specialized Equipment / Facilities (Fume Hood, Computers, Forklift, Kitchen); Equipment Leasing			
Child Care / Services			
ADVISORY SUPPORT AND ASSISTANCE			
Shadow Boards / Mentors			
Loaned Executive To Act In Management Capacity			
General Legal Services			
Advice On Regulatory Compliance			
Federal Procurement Assistance			
Intellectual Property Management			
Assistance With E-Commerce			
International Trade Assistance			

LINKAGES			
Linkages To Strategic Partners (E.G., Co-Bidding, Marketing Collaborations, Joint Selling Or Distribution Arrangements, Subcontract Or Co-Provider Arrangements, Research And Development Contracts, Beta Test Sites, Design Collaborations)			
Linkages To Higher Education Resources (E.G., Student Interns, Faculty Advisors, Specialized Lab Facilities)			
ACCESS TO CAPITAL & FINANCIAL ADVICE			
Linkages To Angel Or Venture Capital Investors			
Help In Accessing Specialized Non-Commercial Loan Funds / Loan Guarantee Programs (Revolving Loan Funds, Equity Pools, Microloans, Receivables, Etc.)			
Help In Accessing Commercial Bank Loans			
MARKETING SUPPORT			
Marketing Assistance (Advertising, Promotion, Market Research)			
PRODUCT DEVELOPMENT			
Commercializing Technology			
Assistance With Manufacturing Practices, Processes, And Technology (CNC)			
Assistance With Product Design And Development Practices, Process And Technology (CAE, CAD)			
GRADUATION SUPPORT SERVICES			
Planning For And Obtaining Office Space; Office Design And Lease Negotiation			
Support In Obtaining Telecomm Services, Network Design, Other Technology Services			
Support In Obtaining Furniture And Office Equipment/Supplies			
Support In Obtaining Office Managerial And Administrative Support.			
Other (Specify):			

ARE YOU A TENANT? (YES) _____ (NO) _____
ARE YOU A GRADUATE? (YES) _____ (NO) _____