

The state of the incubation industry in the Pittsburgh region

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Executive Summary

The incubation sector in Pittsburgh is in a state of evolution. The findings cited in this study and highlighted below reflect a snapshot of that evolution as of August 2000. Although some details may have changed since then, the main findings of the study should reflect the overall picture of the incubation sector in the city at that time. While the findings relate to the incubation sector broadly, the focus of the research has been the new incubator initiatives that have occurred in the region for the last three years.

The new incubation initiatives are distinguished by three general characteristics.

1. The basic service is management expertise
2. There is a new motivation, market focus and goal
3. Intervention is occurring at an earlier stage in the business

Key Findings

- Many new initiatives but no results... yet (Page 12)
- Focus on a specific market space and on time to market (Page 17)
- More involved incubator management (Page 18)
- Too much incubation in Pittsburgh? (Page 18)
- Need to live up to the self-promotion (Page 20)
- New incubators and start-ups value Downtown and the Strip (Page 20)
- Main complaints: Lack of talent and City image (Page 21)
- Need for more solid business models (Page 19)
- Pittsburgh does not compete with Boston or the Silicon Valley (Page 22)

Pittsburgh Incubator Overview

Until recently, incubators in Pittsburgh and in the US were generally characterized as non-profit ventures with the purpose of helping new businesses grow by minimizing their overhead. Now incubation has a different connotation due to a new way of doing business. As discussed in the first part of this study, new forms of incubation have emerged and new actors are participating in the incubation industry.

The Pittsburgh region has been a full participant of the new "wave" of incubation, due to the dynamism the region has experienced in the past years it has been fertile ground to the creation of new economy business incubators. As will be discussed in this section, the CED has identified 25+ incubator propositions in the region, many of which have been created in the past 2 years.

In the following section we will discuss the different characteristics the incubation industry in Pittsburgh currently displays.

1.1.- Classification by type of incubator

From the incubators identified in the region, distinct groups have emerged according to their origin and focus. The groups are characterized by the classification proposed, developed by O. Mac Chinsomboon (<http://chinsomboon.com/incubator>), in the first part of this study. The typology for the incubation models is formed by incubator ventures, venture networks, venture accelerators and venture portals. This typology is broader than the traditional notion of incubator *facilities*.

In order to provide a little more detail we have divided the venture incubators category in the following sub-categories:

- *Traditional*: Those that aim at reducing the cost of starting a business, specifically by offering office space.
- *Tech-incubators*: Very focused on the new technologies (IT and biotech)
- *University related*: Those institutions primarily characterized by having very close links with universities' research.

Name	Incubator			Venture Accelerator	Venture Networks	Other
	Traditional	Tech-Incubators	University			
Adams Capital		•				
Birchmere Investments (Tech Foundry)				•		
Brewery Innovation Center	•					
Center for Entrepreneurial Development	•					
CMU Tech Transfer			•			
Digital Greenhouse						•
Draper Triangle		•				
EXICO	•					
Hispanic Chamber of Commerce	•					
Igate					•	
Innovation Works						•
Iron Bridge Partners		•				
Iventurelabs		•				
IventureWorks		•				
LaunchCyte		•				
McGowan Center			•			
McKeesport Development Corporation	•					
McKinsey & Company (@McKinsey)				•		
Monessen Business Development Center	•					
Monongahela Industrial Development Association	•					
Pantherlab Works			•			
Pittsburgh Gateways Corporation						•
Redleaf (dotDorm) ¹					•	
Remote Experience Lab			•			
Riverside Commons Innovation Center	•					
SPEEDD Incubator Network	•					
University of Pittsburgh Applied Research Center			•			
Venture Beginnings		•				
Zlingshot		•				
Total	9	8	5	2	2	3

¹ This classification applies only to the dotdorm initiative, not other aspects of Redleaf operations.

In the Pittsburgh region, 9 out of 29 initiatives operate under the traditional model, offering basic services and cheap space. Surprisingly enough the new wave of incubators have a presence in the region similar to that of the old model, 8 out of these 29 initiatives are classified under the tech-incubators category. It is important to note that the new role of VC firms in incubation has contributed to the growing presence of tech-incubators in the Pittsburgh region. Furthermore, all of the tech-incubators interviewed are focused in reducing the "time to market" of their incubatees.

The university's role at nurturing startup companies through incubation is also growing in importance. Initiatives such as Pantherlab Works and CMU's Tech Transfer office are examples of the active presence of local universities. Additionally, venture accelerators and networks have a low presence but ambitious initiatives. An example of these is Redleaf's new proposal of incubation called dotDorm. Redleaf has partnered with the University of Pennsylvania at Philadelphia to create an incubator at its campus. The purpose is to be close to the idea flows and to create an early stage fund that will prepare starting companies for the first round of financing (Series "A").

Finally, examples of other types of organizations that provide some funds, advice and networking to starting companies are Innovation Works, Pittsburgh Digital Greenhouse and Pittsburgh Gateways Corporation.

According to the typology of the clustering of incubation activities in the region there are, certainly, many differences of scope and mission among them.

1.2. - Classification by Origin

The incubators *origin* deals with the nature of the incubators operations. These operations can be classified as rent seeking or non-profit. In the early 80's, incubators were characterized as being a non-lucrative business with the sole purpose of reducing costs, the return on investment for the incubator as a business was in a way irrelevant. Now the new "wave" considers incubators a business, which besides helping new businesses to market also seek to earn high profit margins for their investors.

In the Pittsburgh region, the incubator-type initiatives that are considered for profit are those classified as technology incubators and venture capitalists, which account for around 45% of the region's incubator industry. Compared to the national percentage of for-profit incubators (25%) the region has a more predominant presence of rent-seeking initiatives. The non-profit incubators are the traditional 80's type and other programs by government (i.e. Innovation Works). Universities, although leaning more towards a non-profit model, sometimes exchange equity for services. Overall, non-profit incubators have a higher presence in the region (55%) than their counterparts.

Name	Non-Profit			For-Profit			
	Traditional	University	Other	Consulting	Holding Co.	Incubator	VC
Adams Capital							•
Birchmere Investments							•
Brewery Innovation Center	•						
Center for Entrepreneurial Development	•						
CMU Tech Transfer		•					
Digital Greenhouse			•				
Draper Triangle							•
EXICO				•			
Hispanic Chamber of Commerce	•						
iGate							•
Innovation Works			•				
Iron Bridge Partners							•
iVenturelabs						•	
iVentureWorks						•	
LaunchCyte						•	
McGowan Center		•					
McKeesport Development Corporation	•						
McKinsey & Company (@McKinsey)				•			
Monessen Business Development Center	•						
Monongahela Industrial Development Association	•						
Pantherlab Works		•					
Pittsburgh Gateways Corporation		•					
Redleaf (dotDorm)					•		
Remote Experience Lab		•					
Riverside Commons Innovation Center	•						
SPEEDD Incubator Network	•						
University of Pittsburgh Applied Research Center		•					
Venture Beginnings						•	
Zlingshot						•	
Total	8	6	2	2	1	5	5
		16				13	

An important aspect to highlight from the origin of incubators is that for the non-profit sector, the majority was created as either traditional incubators offering cheap space and clerical services or had some type of university related origin. The presence of universities incubators is growing in the region currently representing around 20% of the total number of incubators. On the other hand, for-profit incubators origin is basically conformed by Technology Incubators and VC originated incubators.

1.3.- Classification by Market Space

Tied to the idea of origin, another important characteristic is the incubator's market space focus. With respect to the market focus, traditional incubators have a broader market segment. Although, traditional incubators in Pittsburgh have not limited the type of activities they are willing to incubate they are becoming more interested in the area of technology. As opposed to for-profit incubators, which have a narrower focus, technology incubators and VCs seek to fund businesses in a specific market segment. More than the non-profit incubators, for-profit incubators are focused in particular technology activities. Currently in Pittsburgh the market space is predominantly information technology. An example of an incubator with a close market niche is LaunchCyte dedicated to incubating firms in the biotechnology market.

Name	Information Technology	Biotech	Mixed Uses	Other
EXICO	•			
CMU Tech Transfer	•	•		•
Innovation Works	•			
IVenturelabs	•			
LaunchCyte	•	•		
Pantherlab Works	•			
Redleaf (dotDorm)	•			
Remote Experience Lab	•			
Riverside Commons Innovation Center			•	
Venture Beginnings	•			
Zlingshot	•			
Total	10	2	1	1

1.4.- Classification by Staff Services and Space

As mentioned previously, the main purpose by which incubators guide their activities is again related to their origin. In the region, traditional incubators seek to reduce the cost of making businesses. University incubators purpose is to help promote and nurture initiatives from within the university. The for-profit incubators, which for the region are mainly technology incubators, their purpose is to help businesses reduce their time to market.

According to their purpose, the means by which the incubators in the region look to accomplish their mission is according to the type of activities they perform. The traditional incubators in the region continue to pursue offering cheap office space and service to their tenants. University incubators besides offering space also offer equipment, expertise from small business centers and more importantly they offer a pool of researchers and faculty. For-profit incubators, on the other hand, offer as their most important asset a skilled management and technical staff.

The incubator staff dedicated to achieve the goals listed above again varies from the type of activity. The information gathered through the interviews showed that generally traditional incubators have less than 5 full time staff in their facilities. University incubators also have less than 5 full time staff with the exception of PantherLab Works, which also considers the Small Development Center staff as part of that of the incubator. The for-profit incubators are the ones that have a higher commitment of staff, in general they offer a full time staff of 25 people or more. Hence the ratio of incubator full-time staff with that of the incubatee's staff exhibits the following results in the region. For the traditional and university incubators the ratio is less than 1 to 5 and for the for-profits is greater than 1 to 5.

Name	Incubator's full time staff	Incubatee Staff	Ratio	# of incubates per year	Period of incubation (in months)
CMU Tech Transfer	2	n.a.	-	7	24
EXICO	6-15	n.a.	-	10-15	24-60
Innovation Works ⁶	17	n.a.	-	20+	60
Iventurelabs ¹	70	50	7:5	9	6-9
LaunchCyte ²	10	18	5:9	6	18
Pantherlab Works ⁴	14	n.a.	-	20-30	n.a.
Redleaf (dotDorm) ⁵	70	n.a.	-	50	6-12
Riverside Commons Innovation Center	2	250-300	1:175	36	60+
Venture Beginnings	5-12	15-60	1:5	10	6-9
Zlingshot ³	7-8	30-40	1:5	8-10	n.a.

Note that those incubators with a small number of full time staff usually draw resource from outsourcing companies or from other internal departments

¹Iventurelab has 60 full time staff and 10 interns

²LaunchCyte has 5 full time and 5 part time staff members. LC projections estimate a total of 6 firms for the first year of operation, the number will increase by 2 each year until reaching 17 firms in year 7. the assumption is thus of a total of 68 companies through the incubator in seven years. The typical number of people per company is 3.

³Zlingshot estimates that potentially the incubator's full time staff will be up to 15

⁴Pantherlab works will have one full time manager and one part time consultant. Also 12 full time SBDC employees will be available. 14 MBA students and under-graduate business seniors will provide additional help, as well as a technical team of around 30 people.

⁵Redleaf's incubation program "Dotdorm" plans to have 200 employees by the end of the year.

⁶Innovation Works although graduation policy cannot be compared to that of an incubator, the formal relationship ends with the repayment of the loan.

Besides staff another important element of incubator services, or at least until recently, was space. The traditional incubators, which still pursue the 80's incubator philosophy of cheap space, are the one's in the region that offer greater square footage to incubatees. On the other hand, for-profit incubators do not emphasize space and therefore offer less square footage. University incubators provide varying amounts of space.

Name	Square feet available			Other Space Availability
	5,000 - 10,000	10,000 - 15,000	> 15,000	
CMU Tech Transfer ³				•
EXICO	•			
Innovation Works				•
iVenturelabs ¹			•	
LaunchCyte ²			•	
Pantherlab Works ⁴	•			
Redleaf (dotDorm) ⁵				•
Riverside Commons Innovation Center			•	
Venture Beginnings ⁶	•			
Zlingshot				•
Total	3	-	3	4

¹ iVenturelabs has plans to expand its operations in the future. Additional space will be housed at the Strip District with over 200,000 sq ft available.

² LaunchCyte has ultimately planned to have permanent headquarters of 15,000 sq ft located in the Strip District.

³The Tech Transfer Incubation program offers space at \$8 per sq ft, but there is not an official building at campus dedicated to incubation. Space is made available through the different academic departments; the head of the departments designates the final allocation of space where companies will be located.

⁴Pantherlab Works is looking at additional space at the USX Building for Stage 2 that will cover about 3,000 sq ft

⁵Redleaf is in the process of creating a full service incubator, which will include office space at the University of Pennsylvania in Philadelphia.

⁶Venture Beginnings plans to have a 10,000 sq feet facility in Market Square in January of 2001.

1.5.- Classification by Compensation

In exchange for the services and space they offer, university and for-profit incubators take a part of equity of their incubatee firms. The range of equity for university incubators is in the 5-15%, since the for-profits are more money oriented their range of equity is greater 5-40%. In addition to the equity stake both type of incubators may take Board Seats in the incubatee companies. On the other hand, traditional incubators support their activity by charging fees that are generally below market rates.

Name	Fee		Equity	Range of Equity	Board Seats
	Space	Services			
CMU Tech Transfer ⁴	•		•	10/15%	•
EXICO	•	•	•	n.a.	•
Innovation Works ⁶					
iVenturelabs ¹			•	15-35%	•
LaunchCyte ²			•	40%	•
Pantherlab Works			•	2-8%	
Redleaf (dotDorm) ⁵			•	5%	•
Riverside Commons Innovation Center	•	•			
Venture Beginnings			•	5-35%	•
Zlingshot ³			•	5-20%	•
Total	3	2	8	-	7

¹ iVenturelabs takes 100% of equity of companies internally created

² LaunchCyte takes an average of 40% in equity from companies it incubates. Also the incubator owns 100% of "LaunchCyte-created" companies.

³ Zlingshot's compensation model will be part equity and part deferred compensation.

⁴ The Tech Transfer Office at CMU either takes 10% of equity + royalty or 15% and no royalty

⁵ Redleaf's incubator program named "dotDorm" has planned to take 5% in equity plus convertible loan for Series "A".

⁶ Innovation Works does not generally take equity from their clients, but there is a trigger clause that may allow IW to cash their loans in form of equity.

1.6.- Classification by Years of Operation

The years of operation distinguishes the "new wave" of incubators. The traditional incubators have had a longer presence, with most of them having more than 3 years of operation. The for-profit incubators that have emerged with these new "wave" of incubators have only a year or less of operation.

Although a number of incubators in the region have been running for more than ten years, it is important to highlight the amazing number of incubation projects that have been announced in the last year or less. Many of these new incubators, though, had not begun operation before the publication of this report in December 2000.

Name	Years of Operation			
	Start incubating soon	Less than 1 year	Between 1 and 3 years	More than 3 years
Adams Capital				•
Birchmere Investments (Tech Foundry)		•		
Brewery Innovation Center				•
Center for Entrepreneurial Development				•
CMU Tech Transfer				•
Digital Greenhouse			•	
Draper Triangle				•
EXICO ¹	•			
Hispanic Chamber of Commerce	•			
Igate			•	
Innovation Works ³			•	
Iron Bridge Partners				•
IVenturelabs		•		
IVentureWorks		•		
LaunchCyte	•			
McGowan Center				•
McKeesport Development Corporation				•
McKinsey & Company (@McKinsey)			•	
Monessen Business Development Center				•
Monongahela Industrial Development Association				•
Pantherlab Works	•			
Pittsburgh Gateways Corporation			•	
Redleaf (dotDorm) ²		•		
Remote Experience Lab	•			
Riverside Commons Innovation Center				•
SPEDD Incubator Network				•
University of Pittsburgh Applied Research Center				•
Venture Beginnings		•		
Zlingshot		•		
Total	5	6	5	13

¹ EXICO is a consulting firm has 20+ years of experience but it will not be until this fall that it plans to open an incubator facility.

²Redleaf is a holding company with more than 3 years of experience in the business, but it has recently partnered with the University of Pennsylvania at Philadelphia to open an incubator facility at its campus.

³Innovation Works is a merger of the Ben Franklin Technology Center and the Enterprise Center, both institutions with more than 3 years of experience.

Most of the new wave incubators in the region have not yet started to incubate firms but will in the following months. Although most of the traditional incubators have more than 3 years of experience, the new incubators are coming with a more aggressive market plan than their peers. Many of the tech-incubators are coming with an intense marketing campaign that has people talking about them even though they have not yet started to operate.

1.7.- Classification by Idea Selection

The process by which incubators select the businesses they will incubate is according to their activities. Traditional incubators do not have a selection process specified, usually they go by first come first serve basis. In contrast, universities and for-profit which have a narrower market niche have a more selective process. The guidelines by which these incubators select incubatee businesses is by a careful analysis of the business plan, specifically looking at the management team, market size, market space and property rights. In general, the business plan intake is through the incubators website.

In this context, many of the incubators in the region are opened to the possibility of having internal ideas generate as a source for the proposal of a new incubatees. The incubators in the Pittsburgh region that seek potential gaps in the market to create internal ideas are the universities and for-profit. The traditional incubators go by external ideas only.

1.8.- Classification by Incubation Time Period

The time of incubation is another characteristic that varies across the incubators in the region. Traditional and university incubators have a greater incubation time period, generally greater than 9 months. The time period of for-profit incubators is less than 9 months. The time incubators incubate is related to their graduation policy. The graduation policy for for-profit is based on speed to market, hence these incubators have a smaller incubation period. In contrast, traditional and university incubators have a larger incubation period since their graduation policy is based on the size of the incubatees. For these incubators it may be years until an incubatee reaches a size that an incubator considers no longer appropriate for it to continue on the program.

2.- Main Findings

2.1.- Many new initiatives but no results...yet.

Maybe the most shocking finding of the study is that the only tangible results of the incubation sector in Pittsburgh come from the “traditional” and university-related incubation initiatives. According to the data gathered during the interviews, none of the for-profit incubators has graduated a company yet.

2.1.1.- Why?

There are several reasons that help explain –although not entirely- this situation. The most important are:

- Most of the for-profit incubators are of very recent creation - nine of them were created just this year.
- It takes quite a long time to start operations. The process of assembling the management team, the appropriate space and the advisory board may take between 12 and 18 months.
- Incubators are marketed well before they can accommodate their first start-up. The reasons for this are that it is easier for the incubators to raise money and start to receive business plans if they are known.
- As a consequence of the previous point, this study contains incubators that are at very different development stages. For example, at the moment of the interviews of the 13 for-profit initiatives, 5 were already incubating start-ups, 5 were being put together and 3 seemed to be little else than a project on a paper.

Type of incubator	Actually incubating	Assembling the incubator	Very early project stage
Traditional	6		2
University-related	2	3	1
For Profit	5	5	3

2.1.2.- When could we expect to see results?

Given the model that most of the traditional incubators in the region are following –very loose graduation policies-, there have not been many graduates from these organizations in the recent past.

As for-profit and some of the university-related initiatives, there are a number of points to consider if we are to determine when results should be expected:

- Determine when incubators start their operations in earnest.
- Length of incubation cycles. These range from 3 to 9 months for for-profit initiatives and 3 to 4 years for the university-related ones.
- How bullish the IPO or purchase market is. The more attractive the general conditions are for liquidity events, the greater the incentive for incubators to graduate their start-ups.
- Some of the incubators interviewed commented that they were being extremely cautious with their first incubatees –longer selection processes, more dedication, slower cycles...- because in this sector reputation is everything, and a bad initial track record would hamper the sustainability of their businesses.

Taking all of this into account, one might have expected to see a few start-ups graduating from some of the for-profit incubator pioneers in the region. However, they did not report to have graduated any company, much less having sold or IPO-ed one.

2.2.- Needs they cover

The business incubation sector in Pittsburgh has followed the general trend experienced in the country. The focus of the services provided has shifted from lowering the costs of making business –below market rents and shared services- to providing management expertise to the start-up founders. This trend has been experienced across the different types of incubators, being extremely more marked in the for-profit sector than in the non-profit.

Let us have a closer look at the most important services they provide:

2.2.1.- Management expertise

According to the results of the interviews, Pittsburgh's bottleneck right now is the lack of a large pool of people with management expertise. On the other hand, despite the "leak" of technological talent that the region is experiencing, local universities are still a big enough source of tech labor for fledging companies.

For this reason, the most important service incubators are providing is managerial assistance. They do so at two levels:

- Getting very involved in the early stages of the business definition: Market research, strategy development, market space definition and product definition.
- Company staffing. In many cases, incubators search for and propose high and middle management positions. Given the length of the search process, some of them partner with consulting firms specialized in consulting. Others, go directly to local business schools and have –or plan to have- a continuous recruiting program to supply their incubatees with management professionals.

The biggest difficulty for most of the incubators was to fulfill senior management positions adequately. On one hand such small companies can't afford the high pays that experienced managers ask for. On the other, it seems to be especially difficult to convince professionals that are close to the peak of their careers in engaging in high-risk business. This difficulty seems to be increased by the fact that they do not view Pittsburgh as a sufficiently attractive city to move to.

2.2.2.- Network of contacts

Another important service most for-profit incubators claim to provide is a wide and effective network of contacts. These contacts usually comprise:

- Access to technical expertise. Usually from the advisory board of the incubator
- Managerial expertise. Also from the advisory board
- Contacts with possible key clients or suppliers
- Easier access to Venture Capital and angel investors (see next section)
- Established relationships –sometimes at preferential rates- with key services like legal advice, accounting...

2.2.3.- Facilitate access to venture capital

Most, if not all, for profit incubators in the region claim to have quite a close relationship with local venture capital firms as well as with others from outside the region. Actually, a good number of the initiatives considered in this study come from a VC background or have strong partnerships with VC firms.

These incubators argue that being one of their incubatees is already a strong referral for the VCs when they go for a first round of funding

However, the growth of Venture Capital in the region (see CED's Venture Capital brief, <http://www.heinz.cmu.edu/ced/topics/t2vc/index.html>) has somehow lowered the relative importance of this service for the incubatees. This does not mean that money is readily available for any venture. Rather it puts the emphasis on the need for a strong business plan and managerial team.

2.2.4.- Reduction of information costs

Information costs in terms of both time and money is one of the biggest inconveniences that incubators claim help to overcome.

For example, with more than 400 different programs and institutions dedicated to promoting business creation and economic development in SWPA, the time and effort that entrepreneurs have to invest in finding out sources of financial or technical help, makes starting a business a very time consuming endeavor.

Information specific to the market area the incubatee is going to attack is also very difficult to get unless they have good contacts in other companies working in a similar market and access to updated market research. Incubators tend to provide this type of information through their management team and advisory boards.

Although there are a good number of business resource centers (PTC, Universities' Small Business Development Centers...) the feeling incubators and entrepreneurs report is that there is not one center that they can consider a one-stop shop where they can solve their needs for information.

2.3.- Different incubators, different goals

The fact that different types of organizations have different goals is nothing new, of course. But it is interesting to highlight that although all incubators are supposed to help companies grow, they do it for quite different reasons.

This, in turn, has important implications both for star-ups and for the economic development of the city. By type of incubator, the goals and implications can be stated as follows:

Type of incubator	Main goals	Implications
Traditional	Economic Development	<ul style="list-style-type: none"> • Program usually designed to attract companies to run-down areas • Once the incubator is full there is little incentive to continue spinning companies • Workforce not necessarily very specialized tries to use local labor and create wealth for local community
University-related	Education, Research, Public service	<ul style="list-style-type: none"> • Usually, try to locate close to campuses • Services oriented to Students and faculty • They typically provide industries with many minor discoveries and patents as well as complete business ideas. • Not as easy access to VC but easier access to grants
For-profit	<ul style="list-style-type: none"> • Maximize Profits • Reduce time to market 	<ul style="list-style-type: none"> • Tend to locate in “cool” places, not to create them • Highly specialized labor (from wherever it comes) • Easier access to VCs to fund incubator and start-up’s activities

It seems that different types of incubators may impact the growth of a city in different ways. For example, traditional incubation seems to be an appropriate instrument to start improving the economic climate of a depressed area. The cap in number of companies created is closely related to the size of the building (kind of a one-time push strategy). On the other hand, for-profit incubators want to locate in areas that are already well developed and have plenty of services and amenities. However, its impact in companies’ creation is not limited to the size of their facilities. Even with less companies incubating simultaneously, overtime they can have a greater impact in regional wealth creation.

2.4.- Early point of intervention

Although by nature incubators take in companies at very early stages of development, it is important to realize that there are slight differences among types of incubators regarding the point of intervention. University-based incubators in the region seem to be the ones that intervene at an earlier stage of the ventures. According to the interviews, they even provide space and equipment to help develop the idea fully. However, seed money

and strong management technical assistance take a little more to be provided.

For-profit incubators also intervene at a very early stage of the ventures. However, the business idea needs to be quite more elaborated. The requirements range from reasonably well developed and supported business plans to actual patents or beta prototypes.

Finally, the non-profit incubators in the region seem to be the ones that take a little longer to take in companies. In spite of offering "cheap" office space, start-ups moving to their facilities have to be able to pay the rents. Therefore, founders need to raise funds or start operations before they move to the incubator.

2.5.- Focus, focus, focus

Focus is one of the buzzwords of the newer incubation models. And it is usually referred to two concepts that both incubators and start-ups have to constantly bear in mind:

- Market Space. It is usually defined as the area of technology and type of economic activity where both incubators and start-ups tend to specialize. In general, the narrower and better defined the market space, the better an incubator will be able to provide adequate support to its incubatees and, consequently, the more chances these will have to succeed.
- Time to market. Given the quick pace at which new developments occur and products and services become obsolete, the shorter the time between the conception of a new idea and the launch of the product, the greatest the chances to gain a predominant position in the market.

As a consequence of this, all recently created incubators have a clearly defined idea of what type of companies they want –and are properly equipped- to incubate. Since “general management” mentorship is no longer appropriate, mixed-use incubators –even in the non-profit case- does not seem to be an adequate strategy to pursue.

As mentioned in section 1.3, Pittsburgh’s incubators seem to cover quite well most of the IT branches: software development, telecom, wireless, e-commerce, etc. However, relative to the importance that life sciences have in the city, there is only one incubator, LaunchCyte, that is specifically addressing a very specific part of the “Biotech” industry.

2.6.- Degree of involvement

There is an enormous amount of areas of expertise required to launch a company today (tech companies in particular). For this reason, founding partners need to rely on something more than the general management advice that incubators used to provide in the past.

Not only the newer incubators are a lot more staffed than their traditional predecessors (usually between 1 and 3 incubator staff per 5 start-up staff), but also they are a lot more involved in the day-to-day management of their incubatees.

This has some important implications:

- Since for-profit incubators take a part of the equity of their incubatees in exchange for their services, the relationship established is more one of partnership than of mentoring.
- The for-profit incubator's staff compensation structure tends to provide strong incentives for the direct involvement of the top management in their incubatees.
- One of the important sources of expertise on which for-profit and university-related incubators rely is their Advisory Committee. For this reason, they tend to make big efforts to "recruit" highly renowned experts both in technical fields of expertise or management.

Consistent as this line of reasoning may be, none of the incubators interviewed provides their incubatees with formal commitment on whose counseling or how much real dedication could a start-up receive from the advisory board.

More worrying even, some of the managers that supported this high involvement relationship, shared their time between the incubator and other professional practices.

2.7.- Too much incubation in Pittsburgh?

This was one of the questions in the interviews that provided more interesting results. All interviewees that responded this question were clear and blunt:

"There is too much business incubation in Pittsburgh"

Assertions like "many are going to hit the dot-wall very soon" or "In Pittsburgh there is only space for two good incubators".

2.7.1.- Why?

The reasons they argued for such a gloomy future had to do with two basic aspects of this business:

- The flow of ideas in the region wouldn't be big enough to support so many incubators. Since Universities and big corporations will not be able to produce enough business ideas, incubators –they argued- will have to lower their intake standards and this will mean a greater number of failed ventures.
- The lack of an appropriate business model on the part of many of the recently created incubators.

The final message was that only a few –the ones that can add more value to their incubatees' ventures- would survive. It is needless to say that all interviewees considered they would be one of the few in the final pack.

2.7.2.- But there is no direct competition among themselves

Another interesting aspect of this section was that all interviewees agreed on the fact that they were not competing against each other. In their opinion, the market space that each incubator is targeting is quite clearly defined and, according to their responses, mutually exclusive.

Curiously enough, when asked about competition the interviewees only made reference to competition for ideas or very early stage start-ups. However, nobody mentioned competition for Venture Capital or human resources, the other two ingredients they considered scarcer in the region.

Part of the explanation may be provided by the fact that –when asked about other incubators in Pittsburgh- most interviewees could only provide the names of two or three other incubators. In general, they were well acquainted with the two or three most renowned incubators of their own type. This is, traditional incubators tended to mention traditional type of incubators and for profit incubators usually named for-profit incubators. However, most interviewees lacked –or did not mention- the overall picture of business incubation in Pittsburgh.

As a conclusion, one could say that although all interviewees agree on the fact that there is too much incubation in Pittsburgh, they don't view other people in their business as direct competitors. Part of it may be explained by a "selective attention" approach. However, some incubator managers seemed to be suffering themselves from a lack of complete and updated information about the incubation sector in Pittsburgh.

2.8.- *Their greatest Accomplishment so far: self-promotion*

This section refers mainly to for-profit incubators and, to a lesser extent, to some university related initiatives.

As mentioned in section 2.1, putting together an incubator is a rather long and complex process. Apart from having to deal with the real estate part of the operation, incubator promoters find themselves presenting their project to potential investors well before they can start incubating any company. On the other hand, since the screening process may also take quite a long time, it is necessary that incubator managers start receiving business plans, analyzing them and talking to potential incubatees before they can actually host them.

These two processes –raising funds and attracting potential incubatees- feed each other; for an investor it is easier to make a “go” decision if there are a number of real promising initiatives ready to start. For a potential incubatee, the incubator is going to be attractive not only because of the management expertise from the advisory board or the incubator’s managers, but also because of the financial back-up the incubator can provide, its overall financial health and the trust it merits from the investment community.

In these circumstances, a tool that is often used by incubators to gain investors’ and potential incubatees’ awareness is through well-crafted marketing efforts. The tool they usually employ is Public Relations: presentations to journalists of general and specialized local press, presentations in universities, conference and congress organization.

2.9.- *What they value*

Almost all of the incubators interviewed agreed on the fact that they tried to provide a nice work-atmosphere that promoted the creation and exchange of ideas and that acted as a positive incentive for employees working in the incubator.

Interviewees also agreed on the fact that what made places attractive were the number and type of amenities the area enjoyed. Restaurants, cafeterias, business and personal services commerce, outdoors activities, building design, etc. were the type of things they mentioned to define what they called “cool places”.

However, there is quite a big difference across types of incubators in the way they reach the very desired goal of offering nice places to work. Due to their mission, many of the traditional incubators have tended to locate in depressed or blighted areas. In these instances, incubators have worked as promoters of economic development, employment and, in the end, the

creation of a nice area to work and live. University-related incubators tend to locate close to their campuses and benefit from the level of amenities and the vibrancy of their universities. Finally, for-profit incubators try to locate in places that they find *already* attractive. In the case of Pittsburgh, this means to locate in the Downtown or Strip District areas. Although at present there are just a couple of incubators located in these areas, most of the interviewees had specific plans to locate there in the near future.

As a conclusion, we could say that all incubators place a very high value on amenities, but while traditional incubators tend to “make the place vibrant”, university- related initiatives take advantage of the campus atmosphere and for-profit incubators tend to move to places that already enjoy high quality of work standards. As one can easily infer from this “creation of nice places vs. location in already existing cool sites” can have important consequences for the city’s economic development and Urban planning strategies.

2.10. - The main complaints

When interviewees were asked about the biggest setbacks they had to face, they mentioned a number of factors that ranged from easier access to public money -in the case of traditional incubators- to less public intervention in business development –for profit incubators-. However, there were two issues that most interviewees agreed as being among the most important. One is the need for management talent. The other, the need to provide Pittsburgh with a reputation for being a great place to live, work and start businesses.

2.10.1.- Need for management talent

Since a good number of the business initiatives are undertaken by people with a technical rather than a business background –especially in the case of for-profit and university-related incubators-, the most important service an incubator provides is management expertise. However, fledging companies have to be staffed at one point or another with professionals with business background and experience. And here lays, for most of the interviewees, one of the greatest weaknesses of the region: there is only a small pool of people with these skills where they can draw from. In addition, the attraction of businessmen from other regions is proving to be very difficult.

The scarcity of managers is manifest both at junior and at senior level. Regarding junior management, the interviewees argue that there are not enough graduates from the local business schools that stay in the region. Some of the reasons these junior managers give for not staying in Pittsburgh have to do with the perception of a lack of career opportunities.

As for senior managers, the problem is even bigger. First, the pool of experienced managers is smaller. Second, many times they are in the peak of their careers and tend to have little incentive to take a very risky opportunity in exchange for something as volatile as stock options. And third, if they are not already living here, they do not find the city appealing enough for moving to Pittsburgh.

So far, incubators have been solving this problem by counseling their incubatees –for a fee- after they leave the incubator, hiring part-time CEOs that fly in and out of the city every other week or by turning people with technical skills into the management of the company. In any case, interviewees agree on the fact that this is one of the limitative factors that the sector and, in general, the city will have to solve in the near future

2.10.2.- City Marketing

Those incubators that take a more proactive attitude towards attracting Venture Capital and human resources to the region –again, for-profit and university related incubators- find that it is increasingly difficult to “sell” the Pittsburgh region. According to their opinions it would be a lot easier to attract funds, people and ideas if Pittsburgh was recognized as a magnificent place to work, live and start business.

Although they are an important contributor to the marketing effort they are asking for, they feel that Pittsburgh has more to offer –in terms of quality of life, tech expertise and business opportunities- than what is really perceived. In some of these controversial “hot spots to develop a business” or “best cities to live” rankings, Pittsburgh ranks pretty low –they say- compared to what it really has to offer. This, in turn, impairs them from raising more funds outside the region, attracting people and business ideas.

2.11.- Pittsburgh does not compete with Boston or Silicon Valley

From a city perspective, Pittsburgh’s real competitors for business ideas, people and seed and venture capital are not the Silicon Valley or the Boston corridor. Rather, the Pittsburgh area seems to be competing in a second league, the main characteristic of which is that it is formed by mid-sized cities. Among these cities our interviewees considered Cleveland Pittsburgh’s most direct rival.

According to interviewees, when they are outside the region talking to investors and entrepreneurs, they find themselves competing against other options rooted in cities like Cleveland, Baltimore and Washington DC. Even more to the point, all the local for-profit incubators that commented their

expansion plans were targeting Cleveland as their next step. The main assets Cleveland offered were thriving business creation, faster than average Venture Capital increase, outdoors activities and closeness to Pittsburgh. Closeness to Pittsburgh was important for them because that would allow their senior staff to work, to a certain extent, in both locations. They also mentioned that because of the closeness between the two cities, it was easier for them to build their network of contacts (suppliers, investors, universities...).

The interviews confirmed that probably the biggest assets Pittsburgh has to offer right now are in Oakland. CMU and the University of Pittsburgh are lead institutions in the fields of Information Technologies and Medical sciences, which makes the area very attractive. The ability to leverage business initiatives, staff and expertise from these campuses will be critical to the region's success.

3.- How can the public sector help?

One of the objectives of the study was to identify to what extent and how should the public sector get involved in the development of the incubation sector in Pittsburgh. Once more, the responses given have to be considered according to the type of incubator.

Traditional and, to a much lesser extent, University-related incubators main concern was the availability of funding to continue their operations. Given their public-good missions, these institutions represent a form direct help to the communities where they are located. Therefore, their main concern is to be able to continue operating and providing community services. Since many of them are not self-sufficient, they need to supplement their programs with public money.

The for-profit incubators have a different perspective and they stated their opinions ardently. They addressed many weaknesses of the city not specific to incubation, but which are important nonetheless. Their recommendations include:

3.1.- *Please, do not intervene*

They argue that public intervention in incubation makes sense when the economy of a region is doing very poorly. Nevertheless, in times of strong growth -like the ones the US has been enjoying for the past few years-, it is time for the private sector to take the lead and shape the market as it considers more appropriate.

In the case of Pittsburgh, the growth in venture capital in the past couple of years, the growing number of start-ups and the growth of the incubation sector itself are good indicators of the business potential of the city. For this reasons, they consider that a strong and direct intervention of the public sector would be more harmful than beneficial.

3.2. - Market the city

As mentioned above, one of the biggest complaints all incubators have (especially for-profit) is that Pittsburgh is not well known outside Southwestern Pennsylvania. Since many investors and managers alike still picture Pittsburgh as a “smokestack city”, it is difficult for incubator managers to convince their counterparts of the profound transformation that the city has made over the last decade.

Most interviewees consider this should be one of the areas where public initiative would prove more fruitful. They would like to see Pittsburgh appear more often in the national and specialized press as a business friendly place where people enjoy working, living and starting business.

3.3. - Amenities

Publicizing what the city already has may not prove to be enough. They consider that another important task the public sector should undertake is to equip the city with more amenities and entertainment activities. Especial mention was made of recovering the riverfront for the people of the city to enjoy. They also emphasized that tech professionals –most of their clients- give a great importance to the type of environment they have to work and are increasingly looking for places that are convenient as well as nicely set.

3.4. - Talent

Incubator managers described numerous problems regarding the region's talent pool. A public initiative – in concert with the region's marketing initiative - could help to attract talent to the area. Although the job-follows-people or people-follow-jobs is a topic they did not elaborate upon, they do consider the lack of talent one of the bottlenecks the region may face in the short term.