



**INCUBATORS IN THE NEW ECONOMY
(SHORT VERSION)**

BY

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**SUBMITTED TO THE SLOAN SCHOOL OF MANAGEMENT
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF**

MASTER OF BUSINESS ADMINISTRATION

AT THE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

**JUNE 2000
(VERSION 1.00E)**

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Submitted to the Sloan School of Management
on May 19, 2000
in partial fulfillment of the requirements for the Degree of
Master of Business Administration

ABSTRACT

In recent years, and especially during the past six to nine months, the number of new for-profit high-technology incubators has increased dramatically. Incubators in the New Economy are seen as organizations that can address the unique demands required to create today's successful new ventures: speed-to-market, synergy and network, talent cultivation, and strategic cohesiveness. This study looks at this phenomenon and explores the incubator's operating models and organizational forms, focusing specifically on the value-proposition, sustainability, and scalability factor, with a side analysis of vertically-focused incubators in the wireless-telecommunications space.

The analysis consists of business articles and a total of more than 80 in-depth interviews with incubator founders, venture capitalists, New Economy analysts, New Economy visionaries, entrepreneurs, investors both public and private, and telecommunications executives.

Overall, the industry is new and "hot." A handful of incubators provide obvious value while many others may not provide as much value but are changing to meet the needs of the market. Investors should watch for the effects of Darwinian Theory of Entrepreneurs and plan measures to counter them. As with any type of new industry or business, there are numerous pitfalls.

NOTE: I'm now working on an extended version of this study that will cover more incubators, with a greater focus on the international space, more venture capitalists' comments, as well as those from others in the industry, and provide my comments on other related and topical international business issues. Please signup on the email list at the <http://chinsomboon.com/incubator> website to be notified when this new extended version is available.

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ACKNOWLEDGEMENTS

I'd like to acknowledge special thanks to a number of individuals including Professor Ed Roberts and Ken Morse for their very strategic connections and advice, Professor Simon Johnson, Professor Richard Locke and Shari Lossberg for their Sloan class titled Entrepreneurship and Venture Capital without Borders as well as their great advice, Erin Hoffer (Sloan MBA 2000) for planting the idea of possibly doing a Thesis in the first place, Nils Fonstad (Sloan doctoral student) and Sean Safford (Sloan doctoral student) for helping me hone my thoughts as well as read my Thesis in its most primitive formats, Jim Matheson (HBS MBA 2001) for HBS contacts, Matt Aldrich at KPMG for helpful contacts and future suggestions, Francisco Varela (Sloan MBA 1999) at McKinsey for additional insight and strategic contacts, Benjamin C. Powell (Wharton doctoral student) for an additional listing of incubators, Jana Branch as my Editor, and many others. Thanks also go to the support and contacts of many of my classmates, colleagues, and professors here at the MIT Sloan School of Management, as well as many of my colleagues at the Harvard Business School, especially Peggy Fang and Laurent Burman, both for getting me on-board as a CTO Director for HBS Cyberposium 2000 where additional contacts for the Thesis were made. Special thanks also go to visionaries that have contributed and have provided great insight into my topic, including Warren Buffett during his visit to MIT Sloan to impart his words of wisdom, John Hagel during his presentation at McKinsey's New Economy conference at the University Park Hotel @ MIT, and George Gilder as a speaker at Cyberposium.

BIBLIOGRAPHIC NOTE

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NOTE: This document is a condensed version and only includes the following sections of the full report:

- Introduction
- The New Economy Incubator (Definitions)
- Conclusions
- Contributors (Appendix)

To download the full report (136 pages), please go to:

<http://chinsomboon.com/incubator>

To be notified of the release of the forthcoming Extended Version, please signup for the email list at the above website. The Extended Version will cover more international issues, more incubators, more venture capitalists' comments, more comments from visionaries in the industry and others, and cover relevant topical business issues.

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For the full version, go to:

<http://chinsomboon.com/incubator>

1 INTRODUCTION

In recent years, and especially during mid-1999 to early 2000, the number of new for-profit high-technology incubators has increased dramatically. Incubators are seen as organizations that can address the unique needs of today's new ventures: speed-to-market, synergy and network, talent cultivation, and strategic cohesiveness. The growing number of incubators in the New Economy also represents a wide range of different organizational forms. This paper explores the range of operating models and organizational forms of incubators, focusing specifically on their risks and benefits. This exploration includes an analysis of horizontally (general) versus vertically focused incubators, using the example of wireless-telecommunications in the vertical market.

At the time of this study, business journal articles abound on the phenomenon of for-profit incubators. However, at the time of publication, this paper represents the only comprehensive study with a significant body of supporting research.

This study first explores the following issues:

- The unique nature of an incubator
- How incubators relate to venture capital firms
- The various operating models
- The value proposition of an incubator
- The incubator's risk and pitfalls, such as balancing incentive structures to "build to last" rather than "build to flip."

I suggest answers to the following questions:

- Is there a need for incubators?
- Are incubators just another way to deploy cheap capital?
- How does an incubator ensure good deal flow?
- Why would an entrepreneur go to an incubator?
- How does an incubator accelerate a venture?
- If the market dried up today, would the incubator survive?
- What makes an incubator sustainable and scalable?
- Are incubated companies somehow inferior to companies that have come into being through a process of "trial by fire"?
- Are incubators good investments for New Economy investors?

This study focuses on for-profit incubators, with a portion dedicated to non-profits and their evolution, as they seem to be moving toward partnership with for-profits and/or have some semblance of the for-profit model in their operating structure. Unless otherwise noted as the exception, the paper focuses on the for-profit model.

I conducted interviews with seven groups of people/firms to gain from their insights and experience with incubators:

- Founding members (usually the founder and/or chairperson) of the incubator

- Top-tier high-technology venture capitalists (mostly the founder or a General Partner)
- Knowledge leaders or visionaries in the New Economy space
- Internet and New Economy analysts
- Public stock investors with holdings in excess of \$100,000
- Entrepreneurs, with and without track records, in and out of incubators
- Telecommunications firms that have explored the wireless-telecom industry and the vertically focused incubators in this space.

The interview questions tailored for each group are presented in Appendices I through VII. The questions for incubator founders explored the operating facets of their organizations as well as their own opinions of the industry. Many experts in Boston, Los Angeles and the San Francisco Bay area were interviewed in person. Experts in other geographic areas were interviewed by telephone.

I strove to include as many international incubators and venture capitalists as possible. In total, more than 70 incubator founders/executives (some were multiple locations of a single organization), the senior partners from more than 25 venture capitalist firms, and a handful of experts in the other categories were interviewed for their comments. A summary of incubator data points is included in Appendix VIII¹. Data columns that had a small sampling and/or would give away the identification of a firm were omitted (classification of incubators was omitted for this reason). Appendix IX contains a mapping of incubators interviewed by region. The analysis also took into consideration recent business literature and industry publications.

Many of the firms gave some portion of proprietary information to include in the roll-ups and trends that are presented in this report. A large number didn't yet know how they were structured, knew that their structure would be changing in the very near future, or had to remain vague about the process to protect their proprietary technology. This limitation is a major reason for the qualitative nature of this report. Meaningful measurements in terms of numbers of firms or statistics are not available because the variance was great, sampling size was small for each of the different models (they just don't exist yet), and numbers are rapidly changing from month-to-month.

One indication of rapid change is the large number of follow-up calls I received from incubator founders interviewed who asked for my feedback on their model and suggestions for improvement. They also inquired about trends that are occurring in order to work out solutions that might be more fitting to their organization. Right now, it's all an experiment—they're playing; I'm learning.

¹ Research from interviews conducted after May 1, 2000, will be included in the next version (extended version) of this study. Please feel free to go to <http://chinsomboon.com/incubator> and sign up on the email list and discussion forums. An updated list of companies and individuals interviewed (this and the extended study) is available on the website. The extended version will have a greater international focus as well as cover relevant topical business issues.

2 THE NEW ECONOMY INCUBATOR

2.1 Definition of an incubator

The word “incubator” has been widely used in the press to broadly refer to an organization that helps facilitate the creation of a new enterprise. Other terms that are often used interchangeably are “catalyst,” “facilitator,” “accelerator,” and arguably “venture capitalist” and “angel investor.” It’s all a matter of definition, and that seems to vary greatly.

Merriam-Webster’s [WWWebster](http://www.m-w.com) online dictionary states the following definition of an *in·cu·ba·tor* (date: 1857):

“One that incubates: as (a) an apparatus by which eggs are hatched artificially (b) an apparatus with a chamber used to provide controlled environmental conditions especially for the cultivation of microorganisms or the care and protection of premature or sick babies.”²

If we take this definition and synthesize it into new business lingo, I come up with my definition for incubators:

A controlled environment that fosters the care, growth, and protection of a new venture at an early stage before it is ready for traditional means of self-sustaining operation. In today’s world, where information technology and the Internet are normal parts of the business environment, the term “controlled environment” could be either physical (real estate and office facilities) or virtual (networks).

² Merriam-Webster’s WWWebster <http://www.m-w.com/netdict.htm>

2.2 Incubator categories: defining terms

Generally speaking, incubators can be segmented into the following four categories with very amorphous lines between them:

- Venture Incubator
- Venture Accelerator
- Venture Portal
- Venture Network

In this study, the term “incubator” is used in its broadest definition to cover the full range of categories, unless used in other contexts or otherwise specified.

The figure below summarizes my research on sampled incubators.

Venture Incubator	Venture Accelerator	Venture Portal	Venture Network	Total
28	20	2	2	52
54%	38%	4%	4%	100%

* Closing date of research being May 1, 2000
** Check www.chinsomboon.com/incubator for more statistics as they're being added, post-printing. More incubators, VCs, and other interviews are still being added.

Incubator Classifications of Sample Pool

2.2.1 Venture Incubator

A Venture Incubator is a full-service organization that provides everything a venture could need, including office infrastructure, access to a network of contacts, technology resources, human resources, operational expertise, legal, accounting, etc.

Examples are [CampSix](#), [Cambridge Incubator](#), [IdeaLab!](#), and [eCompanies](#).

2.2.2 Venture Accelerator

Venture Accelerators are services firms that accelerate the process of starting a new venture. They provide consulting services to bolster the business plan, reposition, validate, bring to market, provide due diligence for a venture capital firm or other investor, and make available other for-hire services specific to a new venture. Like any consulting firm, they hope to leverage their broad base of skills, access to “best

practices,” objectivity, and benchmarking in the industry as a rocket booster for new ventures.

Examples are [Intend Change](#), [Reactivity](#), and [McKinsey](#).

Also included in the category of Venture Accelerators are early-stage incubators that are really venture capital firms with active partnerships. These firms provide office space, some strategic assistance, and capital, all with the purpose of helping the firm accelerate. Equity requirements are similar to those of a venture capital firm.

An example is [YankeeTek](#). Other venture firms in this category and interviewed for this study remain unnamed since their announcements are still pending as of this writing.

2.2.3 Venture Portal

Venture Portals are online websites or extranets that create a network of entrepreneurs, advisors, and investors. These sites allow the entrepreneur to submit elevator pitches, business plans, and other criteria for evaluation by investors and/or seek assistance from advisors. These sites can help a venture contact local and global resources that may be beneficial in all aspects and stages of venture development. These sites may also create offline networking events in conjunction with the online network.

Examples are [NVST.com](#), [TheElevator.com](#), and [Garage.com](#).

2.2.4 Venture Network

Often seen as a mix between a venture capital firm and an operating company, Venture Networks invest and sometimes operate at later-than-seed stages, similar to post-second and -third financing rounds. These are often strategic investors for the new venture as well as for other ventures within the firm, with service arms that create network synergies among these investments.

Examples are [Internet Capital Group](#) (Nasdaq: [ICGE](#)), [Net Value Holdings](#) (OTC BB: [NETV](#)), and [CMGI](#) (Nasdaq: [CMGI](#)).

3 CONCLUSIONS

Being a new industry, there aren't many proven models of incubator success. Indeed, success itself is variably defined. Because the majority of incubators do not have track records, it is currently impossible to judge which model objectively works and which doesn't. What is clear, however, is that certain models work better for certain circumstances. Not all models will work in all situations. In other words, not all incubators are created equal.

From my research and interviews with more than 70 incubators, more than 20 venture capitalists, and a handful of other visionaries, analysts, and commentators in this New Economy space, I can suggest answers to the following questions:

3.1 Is there a need for incubators?

Is there a need for incubators? Yes, there seems to be a need for incubators. They play many roles, including the following "ideals," though many incubators will provide a subset of these services or are still in the process of building out their own organization to provide these services:

- Capture potentially successful deals missed by venture capitalists
- Facilitate idea creation (ideation)
- Enhance product and services
- Accelerate speed of implementation
- Provide supplemental management
- Offer more "hand holding" than a typical venture capitalist
- Give access to expertise in marketing, operations, human resources, technical, management, strategy, business development, financial, and others
- Facilitate business development and partnerships
- Help in finding clients
- Facilitate sources of funding, now and later stage
- Portfolioize seed-stage ventures
- Provide additional deal-flow and vetting of deals for later-stage investors

Asked to take a stance on Venture Networks and their value to new venture creation, John Hagel of McKinsey and author of *Net Worth* noted that he'd like to wait and see.

3.1.1 Walled and Unwalled Incubation

In communities that are home to incubators without walls (e.g. MIT), incubators must try to move into the earliest possible position in funding a startup. Otherwise my Darwinian Theory of Entrepreneurs states that these entrepreneurs will go directly to the venture capitalists that swim around the edges of these incubators without walls. There will certainly be statistical deviation, but in these environments, that deviation will be low.

In environments where there's asymmetric access to capital and a network of professionals, there is opportunity for walled incubators. Such examples are the rural parts of the U.S. and, with globalization, (some would say even more importantly) the international markets.

3.2 How does an incubator ensure it gets good deal flow?

How does an incubator ensure it gets good deals over those that get rejected out of hand by the venture capitalists? The Darwinian Theory of Entrepreneurs and adverse selection plays into this question but may be overcome by the following actions:

- Develop internal ideation with the right “crystal ball”
- Get in early, before ventures get to the venture capitalists
- Provide full-service and deep domain expertise that has significant market share and mind share, over and above what a venture capitalist or other strategic investor can provide alone
- Create lower equity requirements
- Develop greater brand equity and mind share
- Build proven track record that gives vetted value
- Demonstrate long-term commitment to entrepreneur's success

3.3 Why would an entrepreneur go to an incubator?

With many sources of funding and avenues of assistance in today's global economy, why would an entrepreneur go to an incubator, as opposed to a venture capitalist or other strategic investor? Here are several reasons that emerged from this research. Incubators offer:

- Assistance in brainstorming a concept or application for a new technology
- Provide additional validation
- Assist in creating the business model and plan
- Facilitate seed funding
- Offer more “hands” to the new entrepreneur
- Provide an option for ventures that are too early or were missed by venture capitalists
- Provide unique access to services in a resource-deficient region (e.g. shortage of office space in Silicon Valley)
- Financial advantage in that cost savings in a contracted time frame are more than the cost of equity that must be given to the incubator
- Offer access to uniquely positioned/qualified domain experts or advisors.

Incubators need to guard against the Darwinian Theory of Entrepreneurs. Most likely their target market is first-time entrepreneurs who have the potential to be top-tier leaders

with great ideas. Incubators need to be aggressive in the local markets to avoid self-selection and attract the best talent and the best ideas.

Incubators that have either initially focused on internally incubating ideas or are now focused on doing so will have to deal with the self-selection of entrepreneurs. Only those who are willing to pitch their ideas without concern about the incubator “borrowing” the idea and morphing it internally will share their ideas.

The converse of this is applicable for incubators who have the three characteristics of incubator sustainability. In joining an incubator, an entrepreneur with a great idea that is not initially defensible could theoretically develop a type of barrier-to-entry, by sheer force of joining the incubator’s network of relevant partnerships. Other ventures that are defensible become even more powerfully defensible by becoming part of such a network.

3.4 How does an incubator accelerate a venture?

Among many factors, an incubator can attempt to accelerate a venture by:

- Fortifying every aspect of the venture and business plan to form a better strategy
- Getting clients faster (and thus revenue recognition)
- Adding a broader, more “seeing” vision
- Depth of experience translates into faster and better execution of the business plan
- Helping ventures avoid the pitfalls that would normally delay development.

3.5 What are scalable constraints to a sustainable incubator?

Incubators that are sustainable have the three assets of (1) recognized name brand in their industry, (2) a large and meaningful Rolodex of contacts, and (3) operational expertise. Incubators with these three assets are hard to scale, especially those that are vertically focused. Incubators have not yet proven to be scalable, but if we take the consulting company approach to opening offices, then with a mature practice and methodology, expansion into other local offices is theoretically possible. This, however, remains to be proven applicable in the very different and quick-paced New Economy venture world, where even today’s traditionally successful consulting firms are going through their own gyrations of reorganization. As [George Gilder](#),³ self-admittedly proclaiming he doesn’t know very much about incubators at the time, stated, he could not envision that office space and other infrastructure alone would create any sustainable advantage for an incubator. Two points that are clear from my research:

- Brand and network contacts are scalable to the extent that there is local mind share and contacts in those markets.
- Founders’ time and expertise are not scalable.

³ Comments from a discussion at the dinner with George Gilder during the HBS Cyberposium Directors’ Dinner at the DoubleTree on February 25, 2000, as well as a personal interview later that evening.

3.6 Are incubated companies somehow inferior to companies that have gained their success through a “trial by fire”?

Does the assistance that an incubated venture receives create companies that are somehow inferior to companies that came into existence through the “trial by fire” method of company creation? The answer to this question could be justifiably affirmative, but incubated companies do not have a sufficient track record to make meaningful assessments. The real answer remains to be seen.

3.7 Are incubators good investments?

Incubation is a high-risk business because it aggregates a portfolio of startups in the riskiest stage of their development. Thus there are numerous pitfalls—as well as great potentials for high returns. Compared to a top-tier venture fund, the general answer will be likely be that incubators are not as favorable an investment. This being said, incubators that provide the right resources, have the right vision, and a perfected methodology for picking the right ventures could be outstanding investments. As noted earlier, [Warren Buffett](#)⁴ himself commented that if he was not looking out for the long-term and only focused on the short-term, he too would IPO.

Factors to consider:

- Being earlier stage → higher risk investments → potentially higher returns
- Potentially more failures due to a greater number of higher risk investments
- Darwinian Theory of Entrepreneurs and adverse selection say these are combinations of initially good and not-so-good deals (versus great deals from the outset)
- Vertical specialization can create more sustainable value but may also create more risk by having a less diversified portfolio of potentially overlapping or cannibalizing investments
- The business is people-resource intensive

3.8 Are incubators a good investment in a softening market?

Incubators may become more important when the markets soften since first-time entrepreneurs may find it increasingly difficult to get to venture capitalists who are funding only entrepreneurs who have a track record and/or those they already know and trust. In a softening market, entrepreneurs who are risk averse tend to go to the more traditional firms and shy away from a startup, thereby weeding themselves out. Those entrepreneurs that do truly want to build a startup stay in the game—these are the true entrepreneurs. This is not a zero sum game, though, and in a tighter market getting seed and future rounds of funding is also more difficult. Those investors whose are risk averse may instead look to fund those with the best brand names and best chances to succeed.

⁴ Warren Buffett was at MIT Sloan on May 4, 2000 for a Q&A session for Sloan MBA students, held in Wong Auditorium.

When there is uncertainty in the markets, companies within the incubators become a higher risk asset which could foster either a greater need for the right type of incubation to ensure these companies are successful or less of a need if ventures shrink and capital becomes more expensive. Today's public markets are favoring the incubator listings and their funds—certainly a benefit in the short-term. The question remains if this proposition will last under long-term scrutiny of the public eye as well as the gyrations in the markets.

3.9 In a nutshell

Overall, the industry is new and “hot.” There are a handful of incubators that provide obvious value and many more that may not provide as much value but are changing to meet the needs of the market.

Watch out for the effects of the Darwinian Theory of Entrepreneurs, and take measures to counter them. As with any type of new industry or business, there are numerous pitfalls, and there will inevitably be a shakeout. Softening public markets exacerbated by the pending rise of interest rates will result in an increase in the costs of capital. Incubators and venture capitalists alike will be tightening their criteria for new venture incubation and head toward incubation tied with true fundamentals—a combination of New Economy venturing combined with Old Economy fundamentals.

The line between early-stage venture capital firms and that of incubators will become even more blurred with continued forward- and backward-integration. Along these same lines, we may not only see tighter partnering between venture firms and incubators and traditional consulting firms and investment banks, but also perhaps mergers and acquisitions between these firms, especially with access to the public capital markets for all of these institutions. Publicly listed incubators, venture capitalists, investment banks, and consulting firms, may soon be merging with each other. The culmination of these new public models as well as mergers between incubators, venture capitalists, banks, and consultants will drive greater expansion into the international markets where huge potential for all forms of incubators waits and has yet to scratch the surface. This expansion will push the development of more innovative models of operation that we have yet to experience.

4 CONTRIBUTORS

Additional contributors that were interviewed after May 1, 2000 are listed at <http://chinsomboon.com/incubator>, and their comments will be included in the extended version of this study.

Incubators

[3Com](#)
[American Computer Foundation](#)
[Arizona Technology Incubator](#)
[Artemis Ventures](#)
[Benchmarking Partners](#)
[Blumberg Capital](#)
[Boulder Tech Incubator](#)
[Breakthrough Commerce](#)
[Brightspark \(Canada\)](#)
[Cambridge Incubator](#)
[Cambridge Technology Partners](#)
[CampSix](#)
[CenComV](#)
[Concrete Media](#)
[Divine Interventures](#)
[DotCom Ventures](#)
[eCiti \(Citibank\)](#)
[eCompanies](#)
[eHatchery](#)
[ehive](#)
[E-Start.com \(London\)](#)
[eVentures \(Chile\)](#)
[Garage.com](#)
[GasPedal Ventures](#)
[Gorann](#)
[Gorilla Park \(Amsterdam\)](#)
[HotBank, i-Group](#)
[iBelay.com](#)
[idealab!](#)
[Incube8.com](#)
[Intend Change](#)
[Internet Capital Group \(Nasdaq: ICGE\)](#)
[iStartVentures](#)
[KnowledgeCube](#)
[Koos Group Next Group \(Taiwan\)](#)
[LabMorgan \(JP Morgan\)](#)
[Long Island High Technology Incubator](#)
[Lycos Labs](#)
[McKinsey Accellerator](#)
[NetValue Holdings \(OTC BB:NETV\)](#)
[NewcoGen](#)
[NVST.com](#)

Panasonic Internet Incubator
Proctor & Gamble iVentures Incubator
Reach Internet Incubator
Reactivity
Redstone7
Rensselaer Polytechnic Institute Incubator Program
Science and Technology Campus, Ohio State University
StartUpAvenue (France)
StartupNetwork.com
The Nelson Companies
TheElevator.com
Trilogy
Venture Frogs
XL Vision
YankeeTek

Venture Capital Firms

21st Century Internet Venture Partners
Accel Partners
Alta Partners
Bank of America Venture Partners
Boston Capital Ventures
BPI Capital Partners, Inc.
Clarion Capital Partners
Commonwealth Capital Venture Partners
Draper Fisher Jurvetson
East River Ventures
Flatiron Partners
Gorann
Greylock
Matrix Partners
Motorola Ventures
Polaris Ventures
Sequoia Capital
Shaw Venture Partners
Silicon Valley Bank
Softbank Ventures
SpaceVest
SUN Technology
Trinity Ventures
Venrock Associates
Zero Stage Capital
Zone Ventures

Others

[George Gilder](#) of the [Gilder Technology Report](#)

John Hagel (author of Net Worth) @ [McKinsey](#)

[National Business Incubator Association](#) (NBIA)

[Neuvis](#)

[RedHerring Magazine](#)

[Robertson Stephens & Co](#)

[US Bancorp Piper Jaffray](#)

[Warren Buffett](#), [Berkshire Hathaway](#) (question posed during Q&A at MIT Sloan on 4-20-00)

Other individual investors and entrepreneurs