



## Technopreneurship in Singapore Alive, well, and roaring for more

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The advent of the Internet and its related high-tech industries has introduced new avenues for entrepreneurship for the small Southeast Asian country of Singapore. As the number of local "technopreneurs" and startups has grown, the government is enthusiastically backing these new innovators with assistance, advice, and best of all, free capital. This article provides a look at this tech-savvy island's tremendous tale of technopreneurship and provides some insight for Singaporeans and non-Singaporeans alike who want to tap into this trend.

Let's be honest: The average Westerner associates the fine city of Singapore with banning chewing gum and caning the American vandal Michael Fay. Singapore's legislated obsession with order and cleanliness often seems both comical and ludicrous to the West. Nonetheless, recent Singaporean initiatives are starting to turn heads for a different, not-so-funny reason: These new initiatives are meant to facilitate Singapore's charge to become Asia's premier alternative to Silicon Valley. Although it is still too early to crown Singapore the "Valley of the East," this small country is well on its way to becoming an Asian hub for technology development and deployment.

### Waking the technopreneurial tiger

The Southeast Asian island city-state of Singapore is home to approximately 3.5 million people. Despite its relatively small size, Singapore has transformed itself from a Third World country into one of the roaring tigers of economic growth. For decades, the government's primary strategy for development focused on the formidable job of attracting and catering to droves of multinational corporations (MNCs). Although this strategy enabled Singapore to become a hub for international trade and to achieve economic growth rates that were previously unimaginable, it meant that local startups were often considered of only secondary importance. Until recently, and with only a few exceptions, the success stories of local entrepreneurs were largely absent from this young country's history.

In 1996, however, an entrepreneurial revolution of sorts began to emerge, fueled by the widespread advent of the Internet.

1996 was the year in which the Internet first began to boom in Singapore, and since then the country

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has witnessed an equivalent boom in entrepreneurial spirit. Inspired by the tales of the initial Internet-made millionaires from America, Singaporeans have jumped on the Internet and technological bandwagons and intend to ride them for all they're worth. The term "technopreneur" has become one of the hottest buzzwords in Singapore to describe people who are willing to embrace risk and take the entrepreneurial plunge into industries ranging from IT to biotech. With the founding of hundreds of new technology startups in the past few years, the government has decided to promote technopreneurship and reap its rewards. For technopreneurs in Singapore, this translates into the paternalistic support of a government that is suddenly bent on facilitating the success of homegrown startups.

### **Creating favorable conditions to help technopreneurship blossom**

Singapore has taken a gardener's approach to technopreneurship. If you want a flower to blossom, you must plant the seed in a favorable environment with enough water, soil, and sunlight. Similarly, in order for technopreneurs to grow, they must have the infrastructure and resources they need. The seed for technopreneurship essentially planted itself in Singapore when the Internet brought down the barriers to entry for business. Since then the government has been working to ensure that the environment is ripe for technopreneurship.

Infrastructure, efficiency, and Internet access alone, however, cannot grow technopreneurs. Another necessary ingredient is an educated and affordable workforce. Because Singapore has practically no natural resources, the country's growth strategy has relied for years on the intellectual capital of its people. With a strong education system, the country is able to produce programmers and engineers that are on par with those in the West. Additionally, most Singaporeans are multilingual -- almost everyone in Singapore speaks at least two languages, including English and the mother tongue of their respective ethnic group (Mandarin, Malay, or Tamil). Thus, you can do development work in Singapore for numerous international markets.

Even though Singapore's adjusted per-capita income is one of the highest in the world, Singapore still maintains a lower cost of living compared to Silicon Valley. This spells significant savings for companies that employ developers.

In 1999, S. Mohan founded Spacedisk, which develops distributed application storage infrastructure, in Singapore. Since then he has moved the company's marketing operations to the U.S., but the company continues to do most of its technology development in Singapore. Mr. Mohan said, "For the time being, the costs are much lower to do development [work] here in Singapore than in the Valley. Our cost of hiring in absolute dollars is about half as much as we would pay for comparable talent in the U.S." This cost advantage will not last forever, but for now it allows local technopreneurs to gain a competitive edge.

### **The Singapore government wants you . . . technopreneurs of all nationalities**

As if creating a favorable environment wasn't enough to encourage technopreneurship, the government of Singapore has attempted to directly

Singapore's technological infrastructure stands out as a world leader. In 1997, it became the first country with a nationwide broadband network. In September, the Internet research company NetValue reported that Singapore has the highest percentage of Internet users in Asia, with 46% of Singaporeans over the age of 15 having gone online in the previous month. Notably, Singapore also has the world's highest percentage of households connected to the Net; its score of 53% even beats out the United States (50%).

nurture technopreneurship with a plethora of assistance and financing schemes.

The National Science and Technology Board (NSTB) is the primary organization charged with providing assistance and spearheading Singaporean technopreneurship. In addition to hosting networking events and providing startups with basic "how-to" coaching, the NSTB also sponsors numerous assistance schemes and contributes seed financing for startups -- not just tax incentives, but actual capital.

For example, upon the recommendations of the Technopreneurship 21 ministerial and private sector committees, the NSTB recently created a new scheme called Venture Investment Support for Startups (VISS). For promising technology companies with a presence in Singapore, the NSTB will invest S\$1 for every S\$2 of private investment, with a maximum investment of approximately US\$300,000.

Cgenerator, a content solutions provider, was recently approved in principle for financing from the NSTB. Mr. Soon Teck Onn, a Malaysian expatriate and the company's founder, said, "The money which [the NSTB] will be putting in us is a relatively modest amount, but it will be very useful -- startups are always hungry. The main utility is still in the credibility and the access this gives us. As a startup there are always those who need some comfort level in dealing with us, and the fact that we have passed the NSTB test does give us a leg up."

Although Mr. Soon claims the NSTB funding is particularly useful during the early stages, he has no misconceptions about relying on government funding for success. He said, "Of course this is only a first step. Whether or not we continue to fulfill our customers' expectations and keep up with the changes in the landscape will determine whether we live or die."

Like the NSTB, Singapore's Economic Development Board (EDB) also sponsors several financing opportunities. The Research and Development Assistance Scheme (RDAS) and the Innovation Development Scheme (IDS) provide funding for R&D and innovation that promise commercial applications. As opposed to venture capital, most of the government's cost-sharing schemes, including the RDAS and IDS, provide financial assistance based solely on goodwill. In other words, for these schemes, the government does not take an equity stake in the startup.

In addition to these three assistance schemes, the NSTB also offers a host of other programs to facilitate Singaporean technopreneurship. NSTB agents can work directly with local technopreneurs to identify the startup's needs and to make recommendations about various programs for which the startup might qualify.

Perhaps the most intriguing aspect about Singapore's assistance schemes is that most are not limited to Singaporeans -- non-Singaporeans can also qualify for them. If you are a technopreneur who is willing to start a technology company in Singapore, or you're an investor looking for opportunities, the government wants you. To encourage non-Singaporean technopreneurs to locate in Singapore, the government has even created a Technopreneur Employment Pass to replace the traditional work permit.

In short, the government is doing everything it can to transform Singapore into a technopreneurial society.

### **Raising capital the traditional way**

If you are an adamant believer in laissez-faire economics, then the Singaporean government's close interaction with the private sector might make you uncomfortable. Fortunately, private venture capital

has also been growing rapidly in Singapore.

Although the assistance schemes have attracted the attention of many technopreneurs, they are not universal solutions for all startups seeking funding. Dr. Lai Kok Fung, the founder of BuzzCity, a personalized news retrieval and delivery service, said the schemes "cannot replace venture funding. We were contemplating applying for the RDAS, but the process was quite complicated and bureaucratic. It is reimbursement-based [so] you have to spend the money and then get up to 50% back. The amount is also small."

Given the shortcomings of the assistance schemes, it is not surprising that the traditional process of securing venture capital for startups remains healthy in Singapore. As a case in point, Dr. Lai's BuzzCity recently closed its second round of financing worth US\$10 million.

According to an April press release from the NSTB, Singapore is home to about 90 venture capital groups, including both international and homegrown firms. In 1999, VCs located in Singapore invested approximately US\$250 million in some 130 local projects. The dollar value of VC investments increased by approximately 160% from 1998 to 1999. Considering Singapore's small size, these figures are dramatic.

Even though there are ample funding opportunities in Singapore, the process is not to be taken lightly. Dr. Lai said, "Times have become tougher since the bubble burst in the U.S. Get used to it -- the free-for-all Internet party is over. There are still enough avenues for funding, but VCs are only going to back companies with original concepts and well-developed business models. In this respect, Singapore is just like the U.S."

### **Every rose has its thorns**

So far, the technopreneurship scene in Singapore looks rosy. Keep in mind, though, a rose has some thorns. Before you decide to pack your bags and set up shop in Singapore, it is useful for you to know some of the prevailing critiques of business in Singapore.

### **First, Big Brother is watching you**

From a Western perspective, the government of Singapore rules with an iron fist. The government regularly censors the media, and even maintains a list of 100 outlawed Web sites, most of which are pornographic and considered objectionable to Singaporean values. By far, the most common Western critiques of Singapore stem from disapproval of the country's firm grip on the freedom of expression. But despite the criticisms from the West, the average Singaporean is more likely to praise the work of the government than to condemn it. After all, the current government has transformed the small island of Singapore from a Third World country into an economic powerhouse.

Due to the government's pro-business mentality, many native entrepreneurs see little value in the debate over liberties. Joe Ngoi, a Singaporean and a co-founder of dotcomERP, said, "I don't think the freedom of expression debate really affects technopreneurs. When we go to business meetings, we talk about business -- not politics. So, even if we had more freedom of expression, it wouldn't help me do more business."

On the other hand, some Singaporeans seem paranoid that the government is constantly monitoring them; after every political comment, whether positive or negative, they say, "But please don't quote me." However, it is the Western expatriates who express the strongest misgivings with the government's ruling tactics. On the condition of anonymity, one Western expatriate said, "Initially, it can be a difficult transition to doing business here. You have to be prepared to compromise and make

some trade-offs. From a Western perspective, you give up certain liberties in exchange for the material wealth and safety of one of the fastest growing economies in the world."

### **Second, the small market can limit you**

It doesn't take a math genius to realize that the Singaporean market is physically limited in size. Although the country has 3.5 million citizens, only about half of them regularly use the Internet -- and the number of online consumers is even smaller than that. Due to its small market, few startups in Singapore will be able to maintain sustained growth by focusing only on the local market. For this reason, most technopreneurs in Singapore must have long-term plans for international expansion.

### **Third, a low regard for intellectual property can hurt you**

Ian Shelley, a Western expatriate technopreneur and a co-founder of OneKnowledge.com, said, "Throughout Asia there are concerns about intellectual property. Singapore is the best in Asia, but piracy still exists here."

The government of Singapore has recently cracked down on software piracy, but it has yet to win the war. Even naïve tourists can easily find makeshift shops peddling pirated software, VCDs, and DVDs. For developers around the world, piracy is a nightmare. Unfortunately, developers cannot escape the problem by simply avoiding business in Asia. It does not matter where you develop your software -- if it becomes popular and you sell it on a retail basis, Asian syndicates will pirate it.

### **Fourth, culture will affect you**

Technopreneurs who want to locate in Singapore should not overlook the fact that this country has a unique culture. Although the hundreds of MNCs that have located here have heavily influenced Singapore's business style, cultural differences can still create unforeseen business obstacles for non-Singaporean technopreneurs. For example, Mr. Shelley said, "It is very easy to set up a business here. But to be successful in an Asian society, you must develop connections -- and that takes both time and energy. Do not underestimate the important process of building connections."

### **The bigger picture: springboarding into Asia**

Regardless of the drawbacks, local technopreneurs are pushing ahead with full force for their startups. Because the Singaporean market is small, most local startups have their eyes on a much bigger, coveted prize: greater Asia. With well over a billion people, the currently underdeveloped markets of Asia (including both China and India) have enough potential customers to make any hungry capitalist drool.

In a report released earlier this year, the GartnerGroup research firm predicted that the Asia/Pacific region (not counting Japan) will see skyrocketing growth rates in both Internet users and e-business. The report forecasts that B2B e-business alone will reach a whopping US\$1 trillion by 2004. Likewise, Lehman Brothers has predicted that the Asian B2C market will also grow substantially -- from US\$6.2 billion in 1999 to US\$22.6 billion in 2001.

Technopreneurs in Singapore are presently focusing on developing and expanding their companies. They want to be ready to pounce when the big Asian markets open up. In the meantime, Singaporean startups are moving into smaller, better-prepared markets, such as Malaysia, Korea, and Taiwan.

Firdhaus Akber, President of Singapore's Virtual Map and streetdirectory.com, views Singapore as a springboard. He said, "In terms of technology, Singapore is ahead of most of Asia. You can use Singapore as a gateway, where you test your ideas and technologies before moving into other Asian markets." Virtual Map has already expanded into Thailand, and the company is currently working on

further expansion plans throughout Asia. Nonetheless, Mr. Akber warns Singaporean startups against the intoxicating lure of expansion. He said, "Don't try to over-expand too soon. Get your fundamentals and your business model right first."

As the mega-markets of Asia start to open, Singaporean technopreneurs promise to be armed with technologies and revenue streams that have already proven themselves in other countries. If this trend continues, Singapore will be well prepared as one of the top Asian hubs for technology development and deployment.

Given its supportive environment, benevolent assistance schemes, and burgeoning springboard status, Singapore poses as an attractive location for both local and non-local technopreneurs. If you can deal with the drawbacks and live without chewing gum, then perhaps you are ready to take on the fast-paced challenges of life as a technopreneur in Singapore. As Mr. Shelley of OneKnowledge claims, "Singapore and Asia are booming, and this region is one of the most exciting business areas to be!"

## Resources

- For both Singaporeans and non-Singaporeans who are considering starting a technology enterprise in Singapore, your first stop should be the [NSTB's Technopreneurship Singapore](#) site. The site's Alpha Kit can provide more information about how to apply for assistance schemes and how to obtain a Technopreneur Employment Pass.
- For general information on the National Science and Technology Board, visit the [NSTB's](#) official site.
- Another useful link is the [Economic Development Board](#). In addition to providing several assistance schemes, the EDB can also assist overseas startups in opening an office in Singapore.
- [Singapore's Infocomm Development Authority](#) also offers several assistance schemes for the development of technology and the implementation of e-commerce.

## About the author

David Burnett is a Thomas J. Watson Fellow and freelance writer who presently lives in Singapore. His current research includes working on a book of the collected "lessons" of Asia's new breed of technopreneurs. For more information about his research, visit [www.Technopreneurial.com](http://www.Technopreneurial.com). David can be reached via e-mail at [david@technopreneurial.com](mailto:david@technopreneurial.com).

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Killer! (5)

Good stuff (4)

So-so; not bad (3)

Needs work (2)

Lame! (1)

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