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The Open Source Business Resource

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Bob Sutor, Vice President of the Open Source and Linux division at IBM, recently stated that "there doesn't seem to be very many good guides about the nuts and bolts of starting an open source business" (http://sutor.com/newsite/blog-open/?p=4599). He speculates that one reason is that "there is no one way to start and run a business that involves open source".

The authors in this issue of the OSBR are serial entrepreneurs, startup founders, and professionals who provide services to and interact daily with startups.

Lisa Torjman and Jon Worren from MaRS, an innovation hub for Canadian science and technology startups, discuss why Canada needs to invest in and nurture a culture of entrepreneurship in order to create successful startups.

Mekki MacAulay, principal at OS Strategy.org, highlights special considerations and pitfalls for open source startups and discusses how startups can use an open source strategy to gain competitive advantage.

Tony Bailetti, Director of Ontario's Talent First Network, describes nine companies located in Canada's National Region and identifies how their founders benefit from the Lead to Win business ecosystem.

William Stewart, CEO of ESERI, describes one startup's experience in integrating open source software into a complete turn-key solution.

Harley Finkelstein, a serial entrepreneur, answers the question "Which is the better path to take, as a push or a pull startup?".

As always, we encourage readers to share articles of interest with their colleagues, and to provide their comments either online or directly to the authors.

The editorial theme for the upcoming March issue of the OSBR is Mobile and the guest editors will be Thomas Kunz and Francois Lefebvre. Submissions are due by February 20--contact the Editor if you are interested in a submission.

Dru Lavigne

Editor-in-Chief

Dru Lavigne is a technical writer and IT consultant who has been active with open source communities since the mid-1990s. She writes regularly for BSD Magazine and is the author of the books BSD Hacks, The Best of FreeBSD Basics, and the upcoming Definitive Guide to PC-BSD.

"Canada must focus on adopting entrepreneurship with rigour – which means fixing the broken links on the long chain of startup activity. Whether academic, government, private or public sector, we need to get better at entrepreneurship as a country. The nation needs to be schooled."

Lisa Torjman

This article aims to debunk common perceptions around why Canada seems to be failing in its ability to create successful startups. A robust startup sector will only be made possible if Canada invests in and nurtures a culture of entrepreneurship.

Setting the Scene in Canada

"I need money." A common assertion upon the mouths of entrepreneurs at startup phase, that money is the sure bet for their success, is one that must be de-mystified. Although capital is certainly quintessential, it is by no means the only factor. Furthermore, lack of investment capital is not the root cause of Canada's deficiency in startup success.

In a report on understanding the disappearance of startups in Canada, the Impact Group (http://www.impactg.com/pdf/disappearanceofstartupsandearlystagefirms.pdf) points out that from a global perspective, Canada is well stocked in technological know-how and has solid skills and traditions in the research and development (R&D) sector. However, this fact might be marred by its inability to grow R&D-intensive firms. In 2001, only 200 of 9,000 R&D-intensive firms were considered to have had significant growth. Between 1994-2001, the high-growth group only saw an increase of approximately 14 new companies per annum.

Despite having healthy supports in place at both the Federal and Provincial programming levels, in the form of R&D tax credits, grants, loans and collaborative

agreements, it's our ability to grow Canada's R&D-intensive sectors that proves weak.

Canada's failure to commercialize its R&D may be a direct reflection of its traditional aversion to entrepreneurism. In more ways than one, the US has typically cultivated and appreciated entrepreneurship more than Canada, and has subsequently reaped the benefits.

The report also pointed out that, although all entrepreneurs face a certain level of failure, serial entrepreneurs are the most successful when compared to university or industrial entrepreneurs. A serial entrepreneur is defined as "somebody who makes a living by starting up companies and operating them until they are competitive, then selling them" (http://encarta.msn.com/dictionary_561534032/serial_entrepreneur.html). This proves an interesting point when correlated to the fact that many American venture capitalists (VCs) are serial entrepreneurs, while their Canadian counterparts generally come from financial, not entrepreneurial backgrounds.

The lack of enterprise experience was also found among Canadian service providers such as lawyers and accountants. More importantly, however, may be the fact that among startups that failed, CEOs tended to be from scientific or technical backgrounds, with no business experience.

Impact Group found that among successful companies around the world, CEOs have remarked that Canada's science and tech expertise is among the world's best and have in fact competed over talent coming out of Canadian universities. However, due to the lack of commercial skills among Canadian graduates, CEOs were instead relying upon American and other foreign nationals for executive talent.

To further contextualize Canada's serious issue with its productivity growth, a report put out by the Council of Canadian Academies states that since 1984, the relative labour productivity in the Canadian business sector dropped from more than 90% of the US level to 76% in 2007, putting the country 15th out of 18 comparative Organisation for Economic Co-operation and Development (OECD) countries (http://www.scienceadvice.ca/documents/(2009-06-11)InnovationReport.pdf).

With a Canadian unemployment rate that increased 46.6% from 5.8% in September 2007 to 8.5% in December 2009, it may be stating the obvious that creating new jobs is a priority for all levels of government, as well as for those affected by unemployment.

A report published by the Kauffman Foundation claims that startups – defined as companies less than 5 years old – accounted for all net job creation in the US between 1980 and 2007, despite the fact that on average, only half of the startups ever get to celebrate their fifth anniversary (http://www.kauffman.org/uploadedFiles/where_will_the_jobs_come_from.pdf). However, the Kauffman report shows that for each pool of startups that reaches the five year anniversary mark, a handful go on to become very large companies and generate thousands of jobs.

With Nortel's bankruptcy and entire industries losing ground, such as car manufacturing, the hope is that more than one breakthrough company like Research in Motion (RIM) emerges from the current crop of startups. Between 2001 and 2008 RIM increased its labour force from 1,200 to 12,000 (although a large part of that was outside of Canada), with R&D spending in 2008 of $383.6M (http://canadianbusiness.com/after_hours/opinions/article.jsp?content=20100113_10001_10001).

As we drag ourselves out of the recent recession, we must keep a rosy outlook on the value of entrepreneurship. It provides a significant opportunity to commercialize some of the world-class research coming from Canadian universities and research communities.

It may be nothing more than a cultural observation, but there is something to be said for the fact that CBC is in its fifth season of the Dragon's Den (http://cbc.ca/dragonsden), a TV show where aspiring entrepreneurs pitch their business concepts and products to a panel of Canadian business moguls. University campuses are lighting up with startup competitions and the entrepreneurship-focused conference circuit is verging on oversaturated.

More than an uptake of entrepreneurism as a notion, Canada must focus on adopting entrepreneurship with rigor – which means fixing the broken links on the long chain of startup activity. Whether academic, government, private or public sector, we need to get better at entrepreneurship as a country. The nation needs to be schooled.

Issues Faced by Startups

The Impact Group report illustrated the need for Canadian startups to enhance their entrepreneurship and commerce-based learning through:

• promotion of role models and success stories

• more opportunities for mentorship

• better learning opportunities in educational and public policy realms

• higher levels of entrepreneurship literacy and access to training

Canadian entrepreneurs need enhanced awareness of where the money is and where the appropriate sources of funding are for specific enterprises. To this end, many organizations, like MaRS (http://www.marsdd.com) and TRRA (http://www.trra.ca), are undertaking large-scale mapping projects and releasing them as public resources.

Access to risk capital is a major issue for most Canadian entrepreneurs. According to CVCA (http://www.cvca.ca), Canadian VC activity levels in the third quarter of 2009 were at their lowest level in 14 years. The $191 million invested by VC firms across Canada in the third quarter of 2009 represent a 51% reduction compared to the same quarter in 2008. In Ontario alone, the decrease in investments was 87% compared with the third quarter of 2008.

Unfortunately, there are no indications that the Canadian VC market will improve. New funds raised by VC firms in the third quarter of 2009 continue to fall with about 50% compared to the levels a year prior.

As part of a survey of entrepreneurs, MaRS solicited feedback to find out: Apart from funding, what is the biggest challenge facing your business at the moment?

23% of the respondents had marketing and sales as the biggest challenge for entrepreneurs. Issues ranged from lacking access to market intelligence to the hardships with sales due to the economic downturn. Market research reports are critical to startups for marketplace insight, but typically come at a preventative cost when purchased directly from established research providers.

A marketing strategy should be informed by keen knowledge of the marketplace: competitors, pricing trends, audience statistics and forecasting. Without this knowledge, it is easy for entrepreneurs to get caught up in assumption making – notably thinking that no one else is doing the same thing, that theirs is a unique business proposition and that the market opportunity is endless. Access to market intelligence is essential to get a sense of the horizontal landscape. Getting a handle on the competitive space will help inform a marketing strategy based on point of difference, which is critical to gain relevancy. For startups that are seeking external investors, understanding the drivers of their market and being able to quantify the size of the market opportunity is of vital importance.

Other concerns included the large cost for marketing implementation and assistance with the preparation of a business plan. Implementation of a marketing strategy, such as a website and other communication pieces, can cost upwards of tens of thousands of dollars. This represents a huge investment cost for a startup as well as a task that many have little or no experience with. The more intimate one's sense of the marketplace, the more strategic one can be with positioning, inevitably mitigating some of the risk.

Marketing and sales are like vertebra on the spine of a solid business plan. It is no surprise that help with business planning preparation was a popular response.

Access to talent was the second most common challenge listed by startups, specifically finding the right personnel in the form of skilled professionals to build the team. Another issue is around team management and managing growth and hiring. Human resources as a management category can commonly be a weak spot for a new, lean team.

Following access to talent was mentoring, which is where issues around strategy and general business practices were raised. On mentoring, respondents listed such issues as:

• business efficiency and business ethics

• how to properly support multiple opportunities

• the management of founder expectations

• advice with regards to strategy

• help sorting through the bureaucracy and time consuming nature of many legal issues

Strategic partners was mentioned as a top need closely after mentorship, and included specifics such as:

• getting in contact with industry partners for research and development

• purchasing and marketing needs

• acquiring low cost manufacturing contacts

• help with the commercialization of a product

• networking

Other needs identified included items such as lack of government financing and support, and protection for intellectual property.

Business Advisory Services From a MaRS Perspective

The mission of the MaRS Discovery Centre, a not-for-profit corporation located in downtown Toronto, is to build companies for economic and social prosperity.

MaRS was founded in 2000 and opened its doors in 2005 with an aim to bolster Canada's ability to commercialize its R&D and intellectual property (IP).

Since beginning its Advisory Services practice in 2006, and through the Government of Ontario's Business Mentorship and Entrepreneurship Program (http://investinontario.com/resources/government_programs_progdetails.asp?pID=209), MaRS has served more than 1,850 clients. The program aims to make clear the distinction between advisory and consultancy.

A client does not pay a MaRS advisor. The model is more education-based where the advisor acts as a mentor to the entrepreneur-student. If the student fails to display the essential characteristic of a successful entrepreneur, namely, a work ethic or the "ability to do their homework", then that proves to be a red flag from the outset. After all, entrepreneurship is based on risk, resolve and resilience.

MaRS' Business Advisory Services takes clients that self-select in one of four categories: Health and related sciences, Information Communication Technology and Digital Media, Clean Technology, and Social Entrepreneurship.

All of MaRS' services are offered free of charge and cover topics such as business planning, market intelligence, financial strategy and expertise in intellectual property. MaRS' uniqueness lies in the fact that it is a convergence centre. It houses entrepreneurs and the groups they may need to help them through the commercialization process, such as VC firms, and advisors.

MaRS is based on a hub-model. We believe that the process of commercialization can be made much smoother by minimizing the typical hardships faced by startups. These are location based issues: if a startup cannot afford rent in the downtown core which is close to legal and venture capital firms, then relationship-building among critical players becomes a daunting task.

However, MaRS is not the only organization to offer free services to startup companies. In fact, it is one of many in Ontario:

• Innovation Synergy Centre in Markham (http://www.iscm.ca)

• RIC Centre in Greater Toronto Area (http://www.riccentre.com)

• OCRI in Ottawa (http://www.ocri.ca)

• Lead to Win in Ottawa (http://www.leadtowin.ca)

• Communitech in Waterloo (http://www.communitech.ca)

• Tech Alliance in London (http://www.techalliance.ca)

There are also sector specific organizations:

• The Health Technology Exchange for Medical & Assistive Technologies (http://www.htx.ca)

• OCETA for Cleantech (http://www.oceta.on.ca)

• BioEnterprise for Agri-Food & Bio-products (http://www.bioenterprise.ca)

The Future

In order to mitigate the lack of risk capital, the Ontario Government has launched a number of funds and initiatives. One such fund is the $29M Investment Accelerator Fund (IAF, http://oce-ontario.org/Pages/CInvest.aspx), which is part of the Market Readiness Program that is co-managed by MaRS and the Ontario Centres of Excellence (OCE, http://oce-ontario.org).

The IAF provides seed funding for early stage startups. Another fund is the $250M Emerging Technology Fund (OETF, http://mri.gov.on.ca/english/programs/oetf/program.asp), a co-investment venture fund for technology startups in digital media, information and communication technologies (ICT), clean tech, and life sciences. These funds are complemented by the $50M Innovation Demonstration Fund (IDF, http://mri.gov.on.ca/english/programs/idf/guidelines.asp), which offers funds to startups that need pilot scale demonstration projects as part of their commercialization cycle.

If there's any argument to be made for growth, the following numbers are most convincing. In 2009 alone there was a 200% growth in the MaRS client portfolio, boosting the number of active clients to 400, and through the network of 70 advisors, 10,000 hours of mentorship were provided.

Success Stories

We conclude with a few of the success stories we have seen at MaRS.

ICT: Skymeter Corp. (http://www.skymetercorp.com) provides data needed to migrate roads and parking from taxpayer-subsidized to pay-per-use funding, cutting citywide emissions by 15 per cent and traffic congestion by 30 per cent. Its

technology, including a small dashboard-mounted GPS device, generates financial-grade data and has been proven by Cisco Korea and California's Department of Transportation. Applications include parking, insurance, car rental and emission metering services. MaRS has contributed to Skymeter's development in many different ways. These include ongoing mentorship from the very early phases. Introductions to investors and potential business partners has helped Skymeter both to raise money as well as mature as an organization.

Life Sciences: INTERxVENT Canada (http://www.intervent.ca) helps organizations reduce medical costs and improve productivity through comprehensive, customized self-help and coach-assisted programs and health statistics reporting to enhance decision-making and resource utilization. INTERxVENT receives mentoring from MaRS advisors on issues focused on business development. Through MaRS, INTERxVENT has received valuable introductions to both strategic partners and potential clients.

Cleantech: Everyone is trying to make solar energy more cost-efficient. Some work on cells to increase efficiency. Some use concentrated solar, where the sunlight is magnified onto a solar chip up to 500 times. Morgan Solar Inc. (http://morgan solar.com) is a concentrated solar company that has patented an interesting way of guiding light onto the chip. Using a kind of clear resin as a wave-guide (like fiber optics but larger) they can have light land on a surface, and at the same time, be guided along that surface horizontally to hit a chip. In December 2009, Morgan Solar closed their first-round investment of USD 8.2 million. Part of this financing was made possible by the direct involvement of MaRS advisors and Morgan Solar have been expanding their team as a result of the investment.

Social Entrepreneurship: Heliotrope (http://www.heliotrope.ca) is a new social enterprise based in Canada. They have created Prelude, a suite of educational tools that develops soft skills —imagination, intuition, hunch, affect and creativity—the value of which is beginning to be properly recognized in the education system and greater society. Like many early-stage ventures, Heliotrope was looking for strategic guidance and access to investment capital. In concert with MaRS Advisory Services (MAS), we:

• linked Heliotrope to contacts with experience in developing online educational businesses and links to investment capital

• provided hands-on business mentoring with MaRS specialists in the areas of intellectual property, patents, and strategic marketing

• arranged meetings with VCs

• introduced Heliotrope to networks for feedback and advice

• attended meetings with prospective clients

• helped Heliotrope develop an investor deck, and offered ongoing support

The Future

Canada has to get better at the practice of entrepreneurship, not just hope for more capital investment. MaRS and other organizations have established an enabling environment to support the growing number of startups and budding entrepreneurs by providing resources, access to advisory and capital services for greater chances of success.

COMMON PITFALLS FOR OPEN SOURCE STARTUPS

If Canada is to reap the benefits of entrepreneurship – job creation, economic and social prosperity – we must be prepared to nurture a strong entrepreneurial culture rather than seeing it as a short-term trend.

Lisa Torjman is an associate of the Social Innovation Generation program at MaRS. The program provides social entrepreneurs access to resources that help them combine economic profit with social purpose. As part of SiG@MaRS, Lisa launched Net Change, a weeklong event, co-created with several partners, which explores the intersection of social tech and social change. Lisa's work at MaRS ranges from strategy development to speaking engagements, most recently for CP24 and O'Reilly's Ignite series. Previously, Lisa worked as an account executive at Toronto-based social marketing agency Manifest Communications, and as a junior associate at the J.W. McConnell Family Foundation over three years.

Jon Worren has 17 years of experience in management consulting, applied research, ICT and clean technology. At MaRS Jon works as a subject matter expert in Strategy and Marketing, and is responsible for developing content for early stage technology start-ups in Ontario. Outside of MaRS, Jon is the founder of ClearSkyAnalyst, a research and advisory firm covering the renewable energy industry. Prior experience includes six years working for industry advisory firm Gartner Inc in Europe, Canada and the US, and seven years working in the software industry, including the two successful software start-ups.

"Open Source requires a willingness to acknowledge what others may see as mistakes in strategy. It goes beyond merely engaging with your community, to treating critics as adults rather than as adversaries, and questions as opportunities to provide insight. A willingness to listen and even change your mind in response to criticism is not something we see in many entrepreneurs. Is it an essential part of the open source business toolkit?"

Dana Blankenhorn
http://blogs.zdnet.com/open-source/?p=3132

Many entrepreneurs look at open source as a panacea of sorts, a golden ticket to success. They assume that the value of the open source approach is apparent to all, undeniable, and the only way. The mistake they often make is carrying this passion into the way they form their startup. They assume that open source startups are somehow different, and that as a result they will carry themselves. I was once such an entrepreneur, with such a vision.

The reality is that an open source startup isn't really that different from other startups. It still needs to have figured out all of the essential components of a successful business. An open source strategy can certainly yield a competitive advantage, bringing faster time to market, lower development cost, collaboration opportunities, ecosystem positioning, and faster adoption. But, these advantages don't come along on their own. The open source strategy is just one piece of the larger business model. The other pieces have to be strong, too, or the whole might crumble. This article reviews the essentials for all startups and highlights special considerations and pitfalls for open source startups in particular. It also discusses how startups can use an open source strategy to gain competitive advantage by focusing the passion and energy surrounding participation in open

source towards value creation and acquisition.

Are Open Source Startups Different?

One of the greatest challenges for entrepreneurs who are passionate about open source is understanding that investors and customers probably don't care that an open source approach is being used. They care about their needs, and what value a company and its offerings bring to them, at what cost, and at what risk. If you can create value for your customers or investors better or more efficiently using an open source approach, great! But the open source approach is not an end of its own.

This concept is enshrined in the founding of the Open Source Initiative (http://www.opensource.org) as a separate entity from the Free Software Foundation (http://fsf.org), and the use of the term "open source" instead of "free software". Eric S. Raymond describes it succinctly: "[T]he term [free software] makes a lot of corporate types nervous. While this does not intrinsically bother me in the least, we now have a pragmatic interest in converting these people rather than thumbing our noses at them. There's now a chance we can make serious gains in the mainstream business world without compromising our ideals and commitment to technical excellence -- so it's time to reposition. We need a new and better label" (http://www.catb.org/~esr/open-source.html).

A focus on the benefits of open source makes customers and investors nervous. The fact is they have their own businesses and portfolios to deal with, and while they might find the goals of the free and open source movements laudable, these goals are not their concern.

At the recent Lead To Win session (http://leadtowin.ca), I was fortunate to overhear

an exchange between an entrepreneur who was pitching an open source startup and a seasoned industry veteran who was coaching him on how to improve his business strategy. The exchange went something like this:

Industry Veteran: "I would never use the open source product your company pitches in my business because the risk is not worth the few hundred dollars I would pay Microsoft in licensing fees for their industry-leading product."

Entrepreneur: "But my open source product is better than Microsoft's product!"

Industry Veteran: "You might think so, but I can't afford to be an early adopter. It's safer for me to use industry-leading products that I know have been road-tested."

Entrepreneur: "The US Military uses the product. There's no risk!"

Industry Veteran: "Then why doesn't the product have a higher adoption rate?"

Entrepreneur: "Because Microsoft has done a marketing campaign of disinformation to discredit the product and promote their solution as better."

At this point, the industry veteran's eyes glazed over as he realised that his message wasn't getting through to the passionate entrepreneur. The lesson here is simple: from the perspective of business people, Microsoft is the market leader in many areas of software. Open source startups cannot compete with or reverse what millions of marketing dollars have accomplished. Instead, these startups need to take a more disruptive approach, focusing on niches that have been ignored by the incumbents. Roger Irwin describes the advantage of small companies thus: "In many industries there exists a

David and Goliath scenario where large corporations simply do not have the agility to match fresh new startups with new ideas, or small companies who just get lucky with a product that just hit the mark at the right time" (http://cavcomp.demon.co.uk/halloween/sstactics.html).

It is the agility of the startup to come up with new ideas and deliver solutions to niche markets that is its primary competitive advantage against incumbents. Taking them head on is simply not an option.

Essentials of Every Startup

There are some essential items that every startup, including open source startups, has to make sure are rock solid in order to have a chance at success.

The product or service the company will offer must solve an immediate and annoying problem for its customers. The customer must have an "itch" that the startup proposes to "scratch" with an innovative solution. This identified need/solution pair is the primary value proposition to the startup's customers. Shopify provides an example of a strong value proposition: "Shopify is a hosted application that allows you to set up an online store to sell your goods. It lets you organize your products, customize your storefront, accept credit card payments through payment gateways, track and respond to orders — all without the hassle of running a physical store" (http://shopify.com/faq/#what-shopify-does).

Free software is an example of a weak value proposition: "Free software is a matter of freedom: people should be free to use software in all the ways that are socially useful. Software differs from material objects—such as chairs, sandwiches, and gasoline—in that it can be copied and changed much more easily. These possibilities make software as useful as it is; we believe software users should be able to make use of them" (http://gnu.org/philosophy/philosophy.html).

The first proposition speaks directly to customers and explains how the proposed solution will improve their business activities. The second speaks of abstract principles that most customers don't understand or care about. While the goals of the Free Software Foundation are good, they do not make a good value proposition to customers. They do not address an immediate and pressing need.

The next thing every startup needs is a unique method or novel approach that sets them apart from their competition. This "pixie dust" must be more than a gimmick. It must answer the question "Why would a client pick you over your competition?". When considering this question, I remember the words of one of my mentors: "There are only two types of business ideas: bad ideas, and ideas that are already being done". Avoid at all costs the assumption that you have no competition. No matter what the product or service is, you have competition. The competition may just not be obvious because they are approaching the problem from another angle, and their solution looks different than yours. Your pixie dust needs to help you stand apart. Examples of poor approaches are lower cost, free USB key with every purchase, or more features than company X. An example of good pixie dust is Amazon's "See what other people who liked this bought" feature. It allows customers to shop and discover new products in ways no other competitor who offer the same products can.

With the value proposition well defined, the next step is to describe a reachable, growing market. This target market should be well defined and understood. It is important to answer questions such

as "Why will the value proposition resonate with this market?", "What is the best way to reach this market?" and "What does this market care about?". Spend some time researching the target market and their business needs. Understand what drives them in their industry, what they view as valuable, and the language they use to describe it.

One of the best ways to get the word out to the target market of the startup and its products or services is to engineer a public relations (PR) campaign. At a recent PR Bootcamp (http://theprbootcamp.com) presentation, Matt Brezina coined the phrase "No one cares about your stupid little startup" and went on to explain strategies on how to make them care (http://mattbrezina.com/blog/2009/12/no-one-cares-about-your-stupid-little-startup-5-tips-to-make-them-care). It is a tough-love lesson that faces the reality that startups are a dime-a-dozen and most of them fail. It is difficult to get the media interested in yet another startup. But, you can help increase your odds of coverage and improve visibility to your target market.

A key component to every successful startup is the team. Picking the right balance of skills is a bigger challenge for most open source startups, as the founders typically come from a technical background. They are usually really good developers and experts in technology, but usually do not have strong backgrounds in business, marketing, sales, and all the other gears that keep the machinery of a successful startup running. The natural urge is to work with friends and fellow developers. The reality is that the team needs a complementary skill set in order to succeed. Working with friends can introduce an extra layer of stress that may hinder progress and could lead to the failure of the business and the friendships. Consider carefully what schools of thought you want on your team. Most open source

startups need to focus on innovation. Be careful when selecting people and resist the temptation to focus on candidates with lots of experience. Experience is useful, but can hinder innovative thought by constraining the mind to focus on how things were done in the past, instead of creative ways to do them more efficiently. Sometimes the most innovative people come from a different field entirely and contribute to the innovative success of the startup with a fresh, unbiased perspective.

Finally, once you have put all the pieces together, make sure to focus. One of the hurdles many open source startups face is entrepreneurial ADD (http://drjeffcornwall.com/2008/08/entrepreneurial-add.html). It is fine to have lots of ideas for products and services, but no business can do everything. Pick one that is viable, and see it through. Be careful to avoid feature glut: the drive to add lots of features to a product before releasing it, without validating that customers even want the features.

Customers Determine Open Source Strategy

When planning how to incorporate open source into the startup's strategy, the answer to the question "Who is the business for?" should be the driving force for business decisions. There are three typical focuses, with various hybrids possible: i) shareholder driven; ii) customer driven; or iii) employee driven. Each of these different approaches has its advantages and disadvantages with some particular things to note for open source startups.

The shareholder driven model is particularly challenging for open source startups as shareholders don't like, and often don't understand, open source business models. The reason is simple: these business models don't match traditional

measures for company valuations, making exit strategies more difficult to figure out. Clean, unambiguous intellectual property is quantifiable. The value of the open source strategy proposition is difficult to quantify because we haven't fully developed the measures that update the traditional business model to conditions of looser intellectual property management. This uncertainty makes shareholders uncomfortable with open source models. Open source entrepreneurs have to be sensitive to this fact and recognize that a shareholder driven model for their company will require a lot of work, and may not be viable for really novel approaches. Investment capital may be limited, so they may have to focus on bootstrap funding (http://en.wikipedia.org/wiki/Entrepreneurship#Financial_bootstrapping) to get their business off the ground.

The customer driven model also presents challenges for open source startups because most customers don't understand open source. There are frequent misunderstandings about such things as what "free" really means and whether a product with open source code is a security risk to their organization. To deal with these challenges, open source startups should not try to fight the battles themselves, and instead focus on adding value to customers. Speak to customers in their language, and leave the open source part out when it doesn't add value that they understand. The value of open source in a customer driven model will come in the service delivery, where the open source startup can leverage a myriad of tools at their disposal to deliver better, faster, cheaper services to their clients. The clients don't need to know how their services continue to work, so long as they do. A customer driven model will also help open source startups in their focus as they have continuous customer input on where to put development effort.

The employee driven model is the most common model for open source startups, but can also be the most limiting. By following the passions of its employees, a startup can develop a strong team that is committed to company success, lower employee churn, and create a rewarding work environment. The cost comes in the risk of alienating shareholders and customers with decisions that don't meet their needs. This conflict sometimes arises if employees are bent on preserving the principles of the open source movement, at any cost. Open source entrepreneurs should tread carefully and make sure that the strategy is well thought out to avoid such conflicts, and keep all their stakeholders happy.

The Attacker's Advantage

In their 2003 article (http://kellogg.northwestern.edu/faculty/sstern/htm/NEWresearchpage/Publications/Gans%20Stern%20RP.pdf), Gans and Stern describe a framework that identifies the central drivers for startup commercialization strategy. They examined the commercialization environment that startups face when translating an idea into a value proposition for customers, and describe the forces that affect startup success. They conclude that the optimal strategy for a startup who is entering a market that has one or more dominant incumbents is based on two factors: i) the ability to preclude effective product development by the incumbent; and ii) the fit of the incumbent's complementary assets to the new value proposition the startup is offering.

The implications of these findings are particularly important for open source startups, as they are not introducing barriers to effective development by incumbents, or other competition. As such, they have two possible strategies they can employ, depending on the incumbents' complementary assets.

Where incumbents have strong complementary assets, and are best able to commercialize the results of the open source startup's innovation, open source startups are in a weak position. They may be able to provide consultative input to the incumbent as specialists in a particular area of innovation. However, they are largely at the mercy of the incumbent and its particular strategy. The startup's efforts are best spent convincing an incumbent that acquiring them is a sound investment to bolster their complementary assets. More importantly, the startup must be careful to develop a relationship with the incumbent in such a way that it doesn't become more viable to simply put the startup out of business by investing into comparable innovation or a competing startup. This relationship between the startup and the incumbent is probably the most important factor in predicting success.

The best position for an open source startup is one where the incumbent's complementary assets don't add anything to the value proposition from the new technology. This incumbent limitation presents an opportunity for the startup to exploit its innovative leadership to capture a possibly ignored market: the attacker's advantage. The performance of the startup depends on its ability to stay below the radar and focus on niche markets that the incumbents have ignored. Using this disruptive approach, the open source startup can capture market share from dissatisfied customers, and customers who value different measures than the current path of innovation by incumbents. By consistently undermining the value of the incumbent's offering through creative destruction, the open source startup can rapidly gain market share. The open source software market has been taking this approach for years, and the success of Firefox, OpenOffice, Linux, and others are key examples.

The startup must also make investments in developing its own complementary assets to ensure that its value proposition is compelling and novel, and to enable it to capture as much value as possible. These complementary assets can come in many forms, such as those described in the open source business models in Frank Hecker's Setting Up Shop (http://hecker.org/writings/setting-up-shop).

Success Without Compromising Open Source Principles

Open source entrepreneurs tend to be passionate, and there's nothing wrong with this passion. In order for an open source startup to succeed, it is not necessary to compromise free and open source principles. Instead, make sure the startup's strategy is aligned in such a way as to harness the passion of its founders and employees for open source, and direct that passion in a way that adds value to customers and inspires shareholder confidence.

Remember to maintain perspective. The loss of perspective is a common pitfall for startups. It's easy to get obsessed with things that don't add value to customers. Listen to your customers and let them help you shape the business as it evolves and grows. Their perspective acts as a sanity check to make sure you haven't lost yours.

Heed the Linux development motto: "Release early and release often" (http://catb.org/~esr/writings/homesteading/cathedral-bazaar/ar01s04.html). This approach jives well with the saying "fail fast". If your business isn't going to work out, it is best that you find out early on before you and others are heavily invested. Failure is a reality of startups, and is to be expected. Don't be afraid of failure. Trying to over-engineer success is like trying to catch lightning in a bottle while spending lots of time and effort on

designing the perfect bottle. Instead, accept that there will always be some amount of chance and timing that are out of your control.

Finally, remember that one of the most common open source business models revolves around reputation. By building an open source startup and getting people involved, you are contributing to the open source community in a positive way. If you do this well, and consistently, people will begin to notice. Most open source startup founders come and go from "day jobs" framing their ventures. Even if the startup ultimately doesn't succeed, the positive reputation for the open source entrepreneur will persist, and they may be an asset the next time around.

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"A minute's success pays the failure of years."

Robert Browning, prologue
from Apollo and the Fates

The objective of this article is to highlight nine creative companies that are part of Lead to Win (http://www.leadtowin.ca) and describe how they benefit from this vendor-neutral business ecosystem.

This paper is organized into three sections. The first section provides an overview on technical entrepreneurship, creative companies and business ecosystems. The second section describes nine startups located in Canada's National Region and identifies how their founders benefit from Lead to Win. The third section provides key takeaway messages about technical entrepreneurship and business ecosystems.

Technical Entrepreneurs

Technical entrepreneurs assemble and lever resources, relationships, reputations, and money in an effort to transform technical innovations into economic goods. Frequently, they disrupt existing order by introducing new products, services and solutions, creating new forms of organizations or exploiting new technologies.

Technical entrepreneurs perceive an opportunity and create an organization to pursue it. These organizations range in scale from projects that involve only the entrepreneur part-time to major businesses that create many job opportunities.

The most obvious form of technical entrepreneurship is that of starting new businesses. Some of these new businesses are referred to as creative companies. A creative company harnesses creative individuals and organizations

worldwide to develop and sell market offers for which their customers are willing to pay.

Creative companies are small, innovative, flexible and deliver value to customers, partners, themselves, and their communities. They also rely on business ecosystems to grow. Creative companies that lever business ecosystems will do well in the new economy.

Creative Companies and Business Ecosystems

Every creative company is part of one or more ecosystems. Each ecosystem, in turn, is comprised of companies and individuals that concurrently collaborate and compete to solve significant customer problems.

A sure formula for killing a small technology company is to ignore the ecosystems of which it is a part. Small technology companies perform better when they are able to add value to their customers and partners by levering key resources in their ecosystems and incorporating ecosystem realities into their products and services and go-to-market strategies.

In a healthy business ecosystem, companies and individuals concurrently collaborate in the production of common assets and use these assets to develop market offers they sell in the marketplace.

Founders who don't understand their company's ecosystem operate at a significant disadvantage. Typically, they don't realize this until it's too late. These founders select small and obscure niches, work to solve the wrong problems, develop products with no customer in mind, are unable to grow revenue, take too long to launch products and

services, and can't tell whether another company is a competitor or a complementor.

How you perceive your business is an important mental construct, because it drives what you do.

In a business ecosystem, the organization responsible for providing the out-of-the-box platform is referred to as a keystone. A keystone organization attracts talented volunteers to collaborate in the production of the assets and delivery of services required by the creative companies, provides ecosystem governance, and maintains the health of the ecosystem.

But an ecosystem, like any organism, is nothing without its health. A healthy ecosystem must have a large number of diverse participants, attract investment, be stable, and create new niche markets. Keystones of healthy ecosystems are lean and effective.

An ecosystem is successful when companies and individuals can generate greater profitable revenue with it than without it.

Visualizing and Shaping Business Ecosystems

Understanding business ecosystems is core to a company's success in the creative economy. Today, a company's business ecosystem is hard to conventionally visualize and much harder to shape in a firm's favour. But to grow a company and reduce its business risk, its management team needs to figure out the best way to leverage the ecosystem in which the company is a player.

Selecting the best strategies to capitalize on an ecosystem is a difficult task, for at least three reasons:

1. We live in an era where the number and diversity of players in an ecosystem is large. Even larger is the number of ways incumbent and emerging players can concurrently co-operate and compete.

2. There are multiple, and often conflicting, perspectives of whom the relevant players in an ecosystem are and how they connect. Manual drawings of players using whiteboards or spreadsheets are impractical and provide limited value. Frequently, critical issues are left unresolved or undiscovered and the environment is only partially represented.

3. Companies operate in a fast-moving and uncertain environment where decisions are often made based on incomplete information and misinformation. Frequently, many founders of technology companies operate in a fog.

The need to visualize and shape business ecosystems creates new opportunities for small technology companies.

Lead to Win

Lead to Win is a vendor-neutral business ecosystem designed to grow creative companies for the purpose of generating technology and knowledge jobs in Canada's Capital Region. Each company in the business ecosystem is committed to creating a minimum of six technology or knowledge jobs over three years.

As of January 2010, sixty technology companies are part of Lead to Win. To join the ecosystem, founders must successfully complete a six-day opportunity development program referred to as Phase II.

Below we highlight some of the companies that are part of the Lead to Win business ecosystem and describe how they benefit from it.

Zeebu Mobile (http://www.zeebu.com): Zeebu's two founders, Dan Gagliardi and Anthony Rizk, are out to create a new market niche. Zeebu's founders use the Lead to Win business ecosystem to identify talent to hire, increase the value of their brand, expand their network, and prepare better applications to government funding sources.

Zeebu's applications turn smartphones into toys that engage, entertain and educate kids from 0-9 years of age. Their distribution platform allows partners to reach targeted smartphone users. The company wants to turn smartphones from a business tool into an educational and entertaining device that can be shared with children.

BabyGO!, is one of Zeebu Mobile's applications. It entertains children using an object that often distances parents from their young children: the BlackBerry. The application, which was developed in consultation with early childhood education (ECE) experts, intercepts all key presses, including incoming phone calls and e-mails, and displays colorful images of the letters while announcing their names and sounds.

As parents of young children, the two founders experienced firsthand the need for entertaining diversions. By observing their own children's fascination with BlackBerry devices, Anthony and Dan realized the potential for a completely new family of mobile applications. Extensive discussions with other users, parents and caregivers confirmed the concept.

ENTREPRENEURS BENEFIT FROM BUSINESS ECOSYSTEMS

RideShark (http://www.rideshark.com): RideShark is a creative Ottawa-based organization that understands its ecosystem and levers it to create value for its customers, partners, community, and themselves. The company was founded by two local engineers, Sharon and Tom Lewinson.

RideShark has developed the most advanced ridesharing and ridematching software system on the market today. Rideshark sells a low-cost, fully hosted service that allows users in a geography or an enterprise to find carpool partners and cycling buddies, track and monitor travel-related emissions, manage priority carpool parking, and operate sustainable transportation incentive programs.

The company founders have positioned RideShark as a player in a ridematching solutions niche that collaborates with thousands of other companies, hundreds of governments, and millions of individuals to reduce greenhouse gas emissions. In contrast, many of its competitors perceive themselves as simply suppliers of software and services to people who want to carpool.

RideShark is sought out by eco-organizations around the world. This increases the number and diversity of the company's customer base, and reduces RideShark's marketing costs. Individuals who are concerned about the planet champion the adoption of RideShark in their organizations. This increases Ride Shark's sales and reduces selling costs.

The time required to develop a new feature or customize an existing one is an important and fundamental value provided by the company. RideShark engages companies in the various ecosystems with a similar environmental worldview to develop new concepts, speed customization, and accelerate new feature development.

As a result, code development never stops and new features are added continually, so the product maintains its technological lead in the market. Feature innovation is a differentiator for which RideShark's customers are willing to pay.

RideShark customers are also attracted to the technology's security and privacy. RideShark levers the ecosystem anchored around the Microsoft Gold Certified Partnership Program and forthcoming ISO27002 certification to deliver privacy and security.

EventuSix (http://www.eventusix.com): EventuSix is an example of a local company solving a real problem and capitalizing on the creation of business ecosystems at the same time. EventuSix is led by Reg Simpson and has six co-founders. The company is an innovator in business environment insight, and makes its money by allowing management teams to visualize their business ecosystems.

EventuSix has prepared an aggressive growth plan based on satisfying the global demand for state-of-the-art visualization tools and processes that help management teams produce a shared view of their ecosystems, and shape it to the company's advantage. The firm, which has partnered with Carleton University researchers, is developing a process and software visualization tool to enable the mapping of complex business environments. The process and visualization tool will be hosted online, to enable interactive building and analysis of ecosystems. Support, workshops and templates are provided throughout the process to achieve timely and high-quality results.

The methodology is anchored around three functions: "map," "shape" and "profit." The map function provides a visual map of customers, collaborators,

and competitors. The shape function is a strategic data discovery playground, where users perform a range of static data analysis, plus "what-if" simulations based on game theory. The profit function is about plan implementation - the steps needed to implement the to-do list from the shape function are spelled out in a prioritized list.

TechnoDevelop: While most of the companies in the Lead to Win business ecosystem generate revenue selling products, services or solutions, a few also sell the intellectual property (IP) they develop. TechnoDevelop sells licences for its IP related to biomedical devices and paperless business-to-consumer communications. Prakash Naidu – a leader in design for automation with decades of experience in biotechnology, robotics, design and manufacturing in Canada, the U.S., and abroad – and Kshirsagar Naidu, a Carleton University alumnus with specialization in software, control and systems engineering technologies, are the founders.

TechnoDevelop is developing a thermal pixel array device that can be used in pain research, human machine interfaces and infotainment as well as by business, government and emergency organizations to communicate with households without using paper. Field trials for the hospital environment are taking place in Toronto. Other applications are under development.

The business-to-consumer communications process is anchored around a network of electronic billboards that bring flyers into peoples' homes, eliminating the use of paper. Businesses and government organizations can send advertising, promotional, or informative flyers to households under the system.

Emergency service providers can send pictorial information to senior citizens, those with hearing or small text reading challenges, people who can't read an official language or have difficulties interpreting accents.

To succeed, a company engaged in IP entrepreneurship must identify technology gaps, reduce the cost of developing and testing the prototypes that fill these technology gaps, work around IP developed by others, protect the IP it develops, and deliver compelling value to go-to-market partners.

TechnoDevelop interacts with suppliers and buyers of new technology that are part of the Lead to Win ecosystem to identify technology gaps and acts quickly to fill them. TechnoDevelop's customers gain from the company's competitive cost-benefit value proposition. While founders of innovative companies may have an innovative business or technology idea, it may not be possible to commercialize it unless the company can overcome the expensive barriers of IP protection.

A vendor-neutral business ecosystem must fulfill the diverse needs of its habitats, and IP entrepreneurship increases the health of a business ecosystem by increasing company and market offer diversity. IP entrepreneurship also introduces new challenges to the business ecosystem – founders of companies engaged in IP entrepreneurship perceive the relevance of the mechanics of patent drafting, IP rights protection and the relationship between IP professionals and company founders differently than do top management teams of small companies that develop and sell products, services, and solutions.

SCTi (http://www.sct-inc.com): SCTi is helping top management teams improve the power efficiency of their data centres and offers its customers: lower energy consumption, lower operating costs, a smaller carbon footprint, prolonged life of centre facilities, and decrease in infrastructure investment.

Arnold Murphy and Luke Connolly are the founders of SCTi. Their company uses new smart metering technology to make the operating costs of data centres visible. To provide an accurate and complete view of a data centre's operations and to identify the areas of inefficiency, the company monitors total power consumption as well as consumption of individual pieces of equipment.

Working with the client, SCTi develops a roadmap for changes to the data centre operations that reduce energy consumption. In some cases, SCTi is able to identify and rectify inefficiencies that may have existed for years but were never apparent until detailed measurements were taken and understood by top management teams.

SCTi is working with Hydro Ottawa to extend and increase the success of their incentive program for new markets.

Acire Systems (http://www.aciresystems.com): Randy Jones founded Acire Systems in September 2008. The company's goal is to improve workforce productivity by developing mobile applications that make it easier and more appealing to do business while "on the go".

Acire Systems' mobile applications enable business people to use their smart phones to invoice clients and report time and expenses at the time they occur. Acire Systems offers ReportAway! (http://reportaway.com), a BlackBerry application which, when used with the online book keeping service FreshBooks (http://www.freshbooks.com), provides an effective mobile invoicing solution. ReportAway! is the first commercially available BlackBerry application for FreshBooks.

Founders of companies that develop mobile applications benefit from the Lead to Win business ecosystem in at least four ways. First, company founders interact with serial entrepreneurs and community experts to harden and strengthen their companies' business opportunities. Randy Jones credits the feedback from the reviewers of his opportunity for helping him improve his company's value proposition to both end users and partners such as FreshBooks.

Second, company founders have access to Lead to Win experts. Randy Jones was able to obtain advice from experts in product positioning, Internet sales, and inbound marketing.

Third, Lead to Win brings together founders of mobile applications companies that operate in Canada's Capital region. The mobile applications group shares experiences, thoughts, and resources in areas critical to their success. Company founders compare various monetization options and examine best ways to engage customers through third party online distribution channels such as the Apple App Store and BlackBerry App World.

Fourth, company founders benefit from the commercial activity among companies that are part of Lead to Win. Through networking events, company founders identify ways to combine their companies' offers to create strong whole product solutions and barter products and solutions to help each other.

In the case of Acire Systems, ReportAway! for FreshBooks provides an ideal solution for many of the companies that are part of the Lead to Win ecosystem that need to account for their time for the purpose of their submissions to the Scientific Research and Experimental Development (SR&ED, http://www.cra-arc.gc.ca/sred) Tax Incentive Program. Acire Systems receives valuable product feedback from company founders who use the system and, in return, participating founders receive an effective time management and invoicing solution at a preferred rate.

Data Bridge Digital (http://www.data bridge.com): The two founders of Data Bridge Digital are Glenn Carley and Dave Burden. Both have considerable experience in physical and electronic media distribution. Teaming up Data Bridge Digital's electronic distribution capabilities with Glenn's existing media production and distribution company allows the company to satisfy the complete spectrum of distribution needs from USB drives to CD/DVD to printing, data distribution, streaming video and mobile device distribution.

Many large companies now totally distribute using electronic downloading. To distribute software or content electronically worldwide, the distribution process must be able to handle peak volumes. Bandwidth performance issues and crashes result in poor customer service or lost revenue.

Data Bridge Digital offers distribution services to organizations that have limited electronic distribution capability in-house and wish to experience the same customer service enhancement, revenue growth and cost reductions enjoyed by larger companies. Data Bridge Digital allows its customers to pay only for the distribution services that they use.

The benefits that Data Bridge Digital delivers its clients include lower distribution costs, better performance and greater worldwide customer penetration. Data Bridge Digital distribution services also provide streaming high-definition full screen video with no "hourglass buffering", mobile device distribution with little configuration, and configuration of on-line libraries and distribution centres.

MarketingMuse (http://marmuse.com): Anthony Mar, Rod Story and Tom Phillips are the co-founders of Marketing Muse, a company that improves the referral rate for healthcare practices, measures their marketing effectiveness, and contributes branded custom websites to support overall marketing effort.

MarketingMuse uses a traditional approach, customer feedback surveys, with a twist: referral marketing. Feedback surveys are a simple way to sustain a dialogue with your clients, but are only effective if the results can be actioned.

MarketingMuse's approach is based on over 20 years of academic research in universities worldwide and one of the areas of specialization for Rod Story, a Ph.D. student at the Sprott School of Business, Carleton University. Until recently, it has been only large, Fortune 1000 sized companies who have been able to run the advanced statistical models that underlie action-ability. MarketingMuse uses web-enabled technology to bring this benefit to small and medium sized companies.

MarketingMuse uses the Lead to Win business ecosystem to prepare proposals for funding, expand its network, develop prototypes of communications enabled applications, and access resources.

InfoGlutton (http://infoglutton.com): InfoGlutton, founded by David Nadeu, helps restaurant owners monitor and improve their reputation. Online reputation

is a combination of what a company says about itself and what its customers say about it anywhere online. To monitor real time reputation, InfoGlutton aggregates online customer feedback and automatically classifies comments into raves and rants. With knowledge of rants, a company can protect its online reputation by monitoring viral negative messages before they cause damage.

The technology is based on social media analytics, search engine optimization techniques and language technology research emerging from the National Research Council and the University of Ottawa.

The online reputation management industry is growing fast, including significant acquisitions and multi-million dollar funding rounds for reputation management software firms.

InfoGlutton uses the Lead to Win business ecosystem to meet potential customers and investors, secure student resources, develop working prototypes of communications enabled applications, and expand its network.

Key Takeaways

The key messages to take away from the article are:

Technical entrepreneurs who ignore the ecosystems of which their companies are a part at their peril. A company can't succeed working alone.

To grow, creative companies must lever business ecosystems, and sometimes shape them.

The need to better understand and visualize business ecosystems drives business opportunities for creative companies.

Founders of creative companies benefit from a vendor neutral ecosystem in a variety of ways. The main benefits of a vendor neutral ecosystem to technical entrepreneurs include: i) accelerates time to cash; ii) increases the size and diversity of the network; iii) increases brand value; iv) increases the likelihood of success when submitting proposals for government funding; v) provides access to more and better business opportunities and requisite resources; vi) reduces the time required to build working prototypes of new products and services; and vii) provides access to understanding first customers who can help develop a better product or service.

This article benefits from a series of articles written for the Ottawa Business Journal (http://www.obj.ca) The original articles were produced in collaboration with the technical entrepreneurs identified above and the newspaper's editorial staff.

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"Worldwide revenue from open source software will grow at a 22% compound annual growth rate to reach $8.1 billion by 2013".

IDC (http://tinyurl.com/yfmjo7p)

Can open source help startup companies reduce cost, save time, and improve their productivity? This article describes the experience of the startup Eseri (http://www.eseri.com) which spent three years integrating the world's best open source software into a complete turn-key small to medium enterprise (SME) information technology (IT) solution. Eseri uses their own system to run the company. Having recently launched, they have targeted startups as their most important market segment.

Tools, Time, and Money

How big is the startup segment? Using U.S. Census data, the Kauffman Foundation found in a 2008 study that "the fraction of employment accounted for by U.S. private-sector business startups over the 1980-2005 period is about 3 percent per year" (http://kauffman.org/uploadedFiles/BDS_Jobs_Created_011209b.pdf).   This translates to about 4 million people working in new businesses in the US and Canada in any given year. By its nature, this segment renews its customer base regularly as new startups are formed. Those that are successful grow to become the established businesses of tomorrow. They make a nice market segment.

What do startups need? A startup ourselves, we have a particularly acute understanding of this question, to which the answers are:

1. powerful tools

2. time

3. money, or at least less bleeding of the little money they have

Startups need to reduce cost expenditure, but they also need powerful technology tools to save them time, so they can focus on their core mission. A startup can cobble together some IT tools cheaply, bringing in the machines they have and using the licenses they can scrounge up. But the integration and maintenance issues will consume their most valuable resource – time. And they won't get the leverage that truly powerful IT can provide to increase productivity and save them even more time.

Increasingly, startups are also virtual. Teams are distributed across a city, region, or the globe, suggesting that a hosted, virtual desktop offering would be useful to help them run a single integrated organization wherever their people may be. Our own startup still does not have a single dedicated bricks and mortar facility, although we operate as a single team with a full suite of collaboration tools to help us get the most out of real-time interaction.

Anatomy of a Solution

At Eseri, we focused our startup on solving the kinds of problems we ourselves encountered, and saw open source as the best and natural solution. Given the risks of committing to proprietary software that could be changed, merged, or license conditions altered without notice, we saw open source as being the safest choice for new companies wanting to avoid large cost investments to solutions that would only bring with them long-term vendor lock-in.

The IT solution we eventually developed is complete, from Intranet to desktops to applications. Since the system is hosted and accessed on virtual desktops, it removes almost all need for local infrastructure.

We put effort into developing one-click management software that enables addition, archiving, and restoration of desktops in just minutes whenever required, so IT personnel are not required. A startup can run a business with no more than netbooks and an Internet connection.

As a first step in creating our solution we evaluated open source across the stack, and found it was ready to serve organizations in every functional category from desktops to applications. It quickly became apparent that the unmet requirement was to integrate the software into a turn-key solution that was easy to operate and manage. To meet those goals it became clear that the system should be hosted, and to maximize user familiarity and reduce retraining, it should be virtual desktop based. Realizing this vision ended up taking us three years of steady, hard work.

We started by filtering the open source world to find the very best components. The operating system was our first selection, and we quickly settled on Ubuntu (http://www.ubuntu.com). In 2005, Ubuntu was on track to become the success at which it has now arrived, being sold on desktops by Dell, and released on netbooks with a range of manufacturers. Choosing system software came next, and we assembled a full suite of components from networking to security to user directory software. We then integrated all of these open source elements into a full hosted Intranet, with all of the networking and other software that sits underneath the desktops to support a multi-person organization.

Choosing the best open source SME applications was considerably more challenging. There are thousands of open source software projects, and in any functional category there are several to dozens of choices. These selection decisions were critical, since changing an application after integrating it would be difficult. More importantly, we wanted to provide our customers with peace of mind and the knowledge that the open source they would be using would be a long term solution.

Some application choices were easy – for example OpenOffice.org as the office suite. Most were more difficult, such as choice of the best document management and customer relationship management (CRM) systems. In the CRM space there were a number of open source solutions, with the best known being SugarCRM.com. However, we were uncomfortable with the license approach of SugarCRM, which included proprietary elements and additional costs related to what we perceived as core functionality, and we found the usability surprisingly complex. At the end of the day we chose the vTiger.com application as it:

- uses free and open source software (FOSS) licensing

- provides a solution with a user friendly interface

- is well sized for small and medium sized enterprises

- has acquired significant market share and become quite successful

Other application choices were made just as carefully, with an eye to choosing the best functionality with pure free and open source software (FOSS) licensing that would guarantee long term cost competitiveness for our customers, and a focus on usability.

Our suite now totals 24 applications, providing capability in pretty much every software category an SME might need except enterprise resource planning (ERP), and we have ERP on our product migration plan. Following our theme of making the system as easy to use as possible, we integrated all multi-user applications with the hosted Intranet to provide single-sign-on functionality, automatically logging in each user with the appropriate access rights as soon as they access the application. Since we are also owners of the FreeOpenSourceSoftware and FreeLibreOpenSourceSoftware domains, we published all of the applications in our solution (and more) on our publicly donated Wiki at FreeOpenSourceSoftware.org.

Bootstrapping

In the open source tradition of proceeding as efficiently as possible, we decided to avoid venture capital (VC) financing, or any type of financing, and to build our solution and create real value through a bootstrapping approach. We assembled a team of six core technical members, two which supported themselves from savings and consulting, and four which worked nights and weekends. We used our own software as soon as it was available to stress it and work out problems, as well as to keep our costs down. We created mailing lists for each area of the company from system administration to management conversations to organized communications. We established a virtual integration lab securely accessible from any location so our distributed team could work from home, and met physically at least once a week to support the team dynamics and schedule rhythm that we needed to progress the company. Our "social events officer" arranged periodic team gatherings where work conversation was off-limits.

We networked as widely as we could to talk to small business owners and managers to understand their key requirements. Local Ottawa organizations like OCRI (http://www.ocri.ca) held regular seminars through the business season, and were invaluable to provide the networking opportunities that allow us to connect with small and new businesses to understand their particular needs and pain-points. We provided beta trials to a few organizations to help validate our approach and obtain valuable feedback to influence our development plan. For example, we learned the benefit of providing bridging from our email system to an organization's existing provider to provide them assurance of reliability before switching over to our system. We now have a handful of customers and a proof of concept plan signed with a large U.S. company to investigate the feasibility of converting 4,000 desktops at remote dealerships from Windows to our solution.

Much of the expert business guidance our startup benefited from came from our Advisory Board. We managed to assemble a great group of advisers, all CEO's with entrepreneurial and startup experience. We met with them individually on occasion for lunch, and we convened a Board of Advisors meeting once a quarter.

Summary

Building a startup is a difficult but worthwhile and ultimately fulfilling experience. If we had to pick three key lessons learned, they would be these. First, be absolutely certain of the correctness of your overall vision before you set out and be ready to surmount any and all obstacles that may arise, since the path you are on will be several times as long and difficult as it first appears. Second, build an excellent team at all levels – domain experts and business experts – and get as much

help and advice as you can the entire way through. And most importantly, never give up. By the very nature of a startup you are on a winding journey on which your idea will inevitably evolve – all setbacks are invaluable and necessary opportunities to improve your plans.

William Stewart is CEO of Eseri. Before founding Eseri, Bill spent 12 years at Lockheed Martin Canada where he served variously as company software and system engineering manager, and engineering lead and project manager of several large system integration projects. Previously, Bill received a Ph.D. in computer science from UNB and worked for the Canadian Federal Civil Service. Bill is an individual member with the Linux Foundation, author of a light-weight software package licensed under the GPL, and maintainer of FreeOpenSourceSoftware.org. He is also author of the Internet reference site LivingInternet.com and the best practices collection FunStandard.org.

Q. Which is the better path to take, as a push or a pull startup?

A. In a recent conversation with a Canadian venture fund about bootstrapping one's startup, I was asked whether I preferred a 'push' or 'pull' model when vetting or building new businesses. Although I had heard of these terms before, this was the first time I actually considered my own partiality for a particular genre of business model. Let's begin with some definitions; a 'push' model relates to an entrepreneur who launches their startup because they believe that they can develop a product or service that combines market appeal with a competitive advantage over competition. As such, it is eventually pushed to the customer via sales. Alternatively, the 'pull' model is based on some certain knowledge that a customer, whether current or potential, is interested in buying a particular widget, and the entrepreneur develops it with that specific buyer in mind, and essentially the product is pulled to market by the customer.

The advantages of the pull model are fairly obvious, because as soon as the development or beta phase is complete, sales by the client who pulled it are inevitable and forthcoming. However the drawback of this style is that the initial interested puller may be the only client that needs such a product/service or is willing to pay for it. Conversely, by developing a business using the push model, the startup has the opportunity to sell their widget to as wide of a market as they wish, and products can be produced with extensive potential applications. Although the push startup may not have a concrete buyer in place prior to launch, as in the case of the pull model, the push-type startup does not encounter the same risks associated with exclusively having only one client.

My revelation in contemplating my own predilection for one model over the other got me thinking about which is most optimal given differing environments. The aforementioned VC tended to fund businesses in the telecommunications sector, and the reason for this was because the fund was backed by a leading phone company. Their methodology was simple; ask their current clients what they were in need of, or what was lacking in the market, and then invest in businesses which produce on that exact need. This allowed the fund to enjoy a tangible payback period which could be easily predicted, as they had the benefit of knowing precise future cash flows and margins before even investing in the pulled product or company. Imagine that you could invest a certain amount in a business today and know with certainty (often backed my quasi-binding letters of interest to purchase) to who and how much of those products would be sold next month...not a bad way to invest.

The flip side of this is the push method, and what I now understand to be my own modus operandi, whereby the product comes first and the customer base is then filled subsequent to going to market. This model allows an entrepreneur to build a product or service in almost any sector, assuming a certain propensity to operate in an industry where the founder has some experience, and sell to a variety of customers. The snag here is that from an investment perspective there is a higher risk associated with backing or launching a business that doesn't secure customers in advance of its launch.

While a pull method uses supply as the initial impetus for growth, and a push strategy uses demand as its catalyst, in contemplating your own strategies for launch consider not only your own risk tolerance, competitive strengths or experiences, but also deliberate whether you have the network to create a pull model and build your startup around a particular need from a particular customer. If you are like me when I got my start, chances are your network is still in its preliminary stages and as such you may want to consider buying or developing a product or service that fills a void which is felt by a multitude of customers, not just one, through a push model.

Harley Finkelstein is a serial entrepreneur who has launched a number of successful tech startups, and he is the founder of one of Canada's leading apparel companies, fink inc. Additionally, Harley serves as a mentor to the Ottawa Centre for Research and Innovation (OCRI), and sits on the financing committee for the Canadian Youth Business Foundation (CYBF). In 2007, Harley founded Innoventure Capital, a unique seed financing firm that provides funding and strong mentorship to early-stage startups. Innoventure's latest startup is Smoofer.com, which purports to be Canada's leading online t-shirt shop. Harley recently received his law degree from the University of Ottawa, and will be completing his MBA at the school's management faculty in summer 2009. In 2005 he graduated with distinction from Concordia University where he received his degree in Economics.

Recommended Resource

SuperAngel Network
http://www.superangel.ca/

The Economic Case for Open Source Foundations

Copyright: Dirk Riehle

From the Abstract:

There are many reasons why software development firms join and support a foundation. One common economic motivation is to save costs in the development of the software by spreading them over the participating parties. However, this is just the beginning. Beyond sharing costs, participating firms can increase their revenue through the provision and increased sale of complementary products. Also, by establishing a successful open source platform, software firms can compete more effectively across technology stacks and thereby increase their addressable market. Not to be neglected, community open source software is a common good, creating increased general welfare and hence goodwill for the involved companies.

http://dirkriehle.com/publications/2010/the-economic-case-for-open-source-foundations/

Open Source Solutions: Managing, Analyzing and Delivering Business Information

Copyright: BeyeNETWORK

From the Executive Summary:

Venture capital flooding into open source startups over the past several years resulted in an explosion of enterprise-ready tools and applications. Many of these startups are focused on the business intelligence market. Open source rose quickly in the information management market, from almost nothing a few years ago to community and commercially supported projects for every possible use. The goal of this report is to explain aspects of the usage, challenges and practices of organizations adopting open source in the business intelligence and data warehouse market.

http://www.pentaho.com/open_source_solutions_report/

The Impact Of Opencourseware On Paid Enrollment In Distance Learning Courses

Copyright: Justin Johansen

From the Abstract:

This study examined the cost of converting online distance learning courses to OCW, the impact of opening these courses on paid enrollments, and the long-term sustainability of OCW through the generation of new paid enrollments. As part of this study, Brigham Young University's Independent Study Program (BYU IS) converted three university and three high school courses to OCW. BYU IS provided an option for OCW users to pay regular tuition and enroll in the online course for credit.

http://contentdm.lib.byu.edu/ETD/image/etd3317.pdf

February 20

Soo PodCamp

Sault Ste. Marie, ON

Soo PodCamp 2010 is a free unconference bringing together professionals and hobbyists from Toronto and the surrounding area to explore the cutting edge of new and social media. If you are an online content creator - hobbyist or professional - who is building communities online in a variety of ways, then PodCamp Toronto 2010 is for you. Share ideas, discuss theories and learn lessons from an audience of experts. Network, network, network. All are welcome.

http://soopodcamp.com/

February 20-21

PodCamp Toronto

Toronto, ON

PodCamp Toronto 2010 is a free unconference bringing together professionals and hobbyists from Toronto and the surrounding area to explore the cutting edge of new and social media. If you are an online content creator - hobbyist or professional - who is building communities online in a variety of ways, then PodCamp Toronto 2010 is for you. Share ideas, discuss theories and learn lessons from an audience of experts. Network, network, network. All are welcome.

http://2010.podcamptoronto.com/

March 10-12

ConFoo

Montreal, QC

PHP Québec, Montréal-Python, Montréal on Rails, W3Qc and OWASP Montréal are proud to announce the first edition of the Confoo.ca Conference. International experts in Java, .Net, PHP, Python and Ruby will present solutions for developers and project managers. The Conference will provide an excellent opportunity to meet speakers, developers and decision-makers from various language and business communities.

http://confoo.ca/en

March 24-26

CanSecWest

Vancouver, BC

CanSecWest, the world's most advanced conference focusing on applied digital security, is about bringing the industry luminaries together in a relaxed environment which promotes collaboration and social networking. The conference lasts for three days and features a single track of thought provoking presentations, each prepared by an experienced professional and talented educator who is at the cutting edge of his or her field. We give preference to new and innovative material, highlighting important, emergent technologies, techniques, or best industry practices.

http://cansecwest.com/
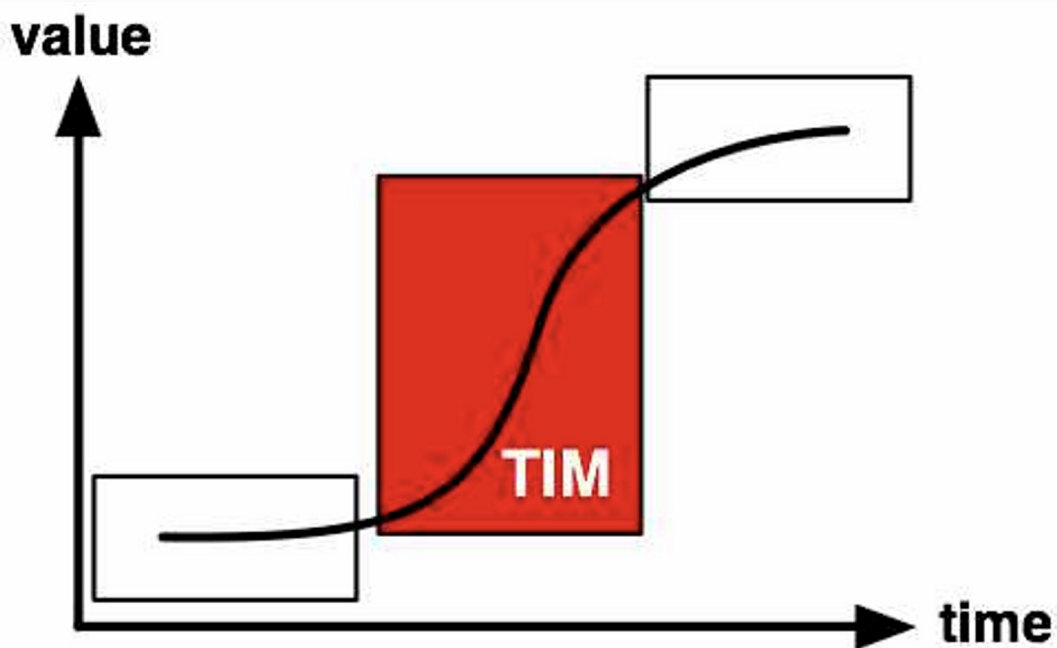
The goal of the Open Source Business Resource is to provide quality and insightful content regarding the issues relevant to the development and commercialization of open source assets. We believe the best way to achieve this goal is through the contributions and feedback from experts within the business and open source communities.

OSBR readers are looking for practical ideas they can apply within their own organizations. They also appreciate a thorough exploration of the issues and emerging trends surrounding the business of open source. If you are considering contributing an article, start by asking yourself:

1. Does my research or experience provide any new insights or perspectives?

2. Do I often find myself having to explain this topic when I meet people as they are unaware of its relevance?

3. Do I believe that I could have saved myself time, money, and frustration if someone had explained to me the issues surrounding this topic?

4. Am I constantly correcting misconceptions regarding this topic?

5. Am I considered to be an expert in this field? For example, do I present my research or experience at conferences?

If your answer is "yes" to any of these questions, your topic is probably of interest to OSBR readers.

When writing your article, keep the following points in mind:

1. Thoroughly examine the topic; don't leave the reader wishing for more.

2. Know your central theme and stick to it.

3. Demonstrate your depth of understanding for the topic, and that you have considered its benefits, possible outcomes, and applicability.

4. Write in third-person formal style.

These guidelines should assist in the process of translating your expertise into a focused article which adds to the knowledgable resources available through the OSBR.

Upcoming Editorial Themes	
March 2010:	Mobile
April 2010:	Cloud Services
May 2010:	Communications Enablement
June 2010:	Growing Business
July 2010:	Go To Market

Formatting Guidelines:

All contributions are to be submitted in .txt or .rtf format.

Indicate if your submission has been previously published elsewhere.

Do not send articles shorter than 1500 words or longer than 3000 words.

Begin with a thought-provoking quotation that matches the spirit of the article. Research the source of your quotation in order to provide proper attribution.

Include a 2-3 paragraph abstract that provides the key messages you will be presenting in the article.

Any quotations or references within the article text need attribution. The URL to an online reference is preferred; where no online reference exists, include the name of the person and the full title of the article or book containing the referenced text. If the reference is from a personal communication, ensure that you have permission to use the quote and include a comment to that effect.

Provide a 2-3 paragraph conclusion that summarizes the article's main points and leaves the reader with the most important messages.

If this is your first article, include a 75-150 word biography.

If there are any additional texts that would be of interest to readers, include their full title and location URL.

Include 5 keywords for the article's metadata to assist search engines in finding your article.

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The Technology Innovation Management (TIM) program is a master's program for experienced engineers. It is offered by Carleton University's Department of Systems and Computer Engineering. The TIM program offers both a thesis based degree (M.A.Sc.) and a project based degree (M.Eng.). The M.Eng is offered real-time worldwide. To apply, please go to http://www.carleton.ca/tim/sub/apply.html.

Coral CEA is a member-based company whose mission is to assist companies of all sizes with the commercialization of communications-enabled applications (CEA). We are creating and anchoring a business ecosystem that leverages a unique, technical platform that provides advanced ICT building blocks to members. Visit http://www.coralcea.ca to become a member.