

in ITAlics **New Model Business**

by James Hale, ITAC Online Editor

Remember the scene in David Fincher's film *The Social Network* where Facebook founder Mark Zuckerberg says he wants to hold off on monetizing his creation because making money would take the fun out of it?

By definition, most entrepreneurs do not have Zuckerberg's willingness to sacrifice potential profit to keep something "cool," but an increasing number of people in the ICT sector are experimenting with new business models. In a world as fluid and risk-filled as ours, they say, why stick with the tried-and-true? Why not create businesses that can morph with changing markets and spin out new companies with a tight focus on one goal?

This month, *ITAC Online* profiles member BNOTIONS, which recently won a prestigious Innovation Award created by Zuckerberg's now-highly-monetized empire, and talks with the director of business development for VENUS Cybersecurity, a not-for-profit that offers a number of ways to collaborate on making digital transactions safer.

BNOTIONS: The fast and the flexible

BNOTIONS founder
Alkarim Nasser

In the first tech boom, a lot of companies boasted of being as quick and nimble as a certain candlestick jumper. If the 2000 crash taught anything, it was that many were not flexible enough.

At Toronto-based BNOTIONS, change is constant.

"We basically reinvent ourselves every four months," says partner Paul Crowe, who calls his company a "full-service innovation firm."

The decision to adopt constant change was influenced by Apple CEO Steve Jobs' controversial 2010 open letter that decried the efficacy of Flash. Until then, BNOTIONS, which was founded in 2008 by Alkarim Nasser, had been an enriched media development shop building largely on Flash.

"The lesson was, 'Don't focus on technology,'" says Paul. "So, now, we're not a mobile company, not a web company; we're developing for connected cars, for wearable technology. The coming of the internet of everything means more connected data, and that means more opportunity."

One of the opportunities Crowe, Nasser and their associates seized was to incubate a data science and analytics branch internally and then spin it off as Gallop Labs, which works primarily with application developers who want to engage users. Among its clients is the New York Times, a leader among old school media companies looking to stay ahead of a shifting environment. Earlier this summer, Gallop won the Facebook Innovation Competition in the Mobile App solution category.

Now, BNOTIONS is incubating another venture—one focused on predictive data modelling.

Paul says the company is constantly watching for new openings, basing its decisions to move on the needs that customers express.

"If you get two clients with the same need, that's an opening for a new venture."

To deal with the fluid nature of this kind of growth, BNOTIONS maintains a core staff of about 50-65 people who are as open to change and risk as senior management. Every Wednesday morning, the entire staff convenes to examine the present, if shifting, state of affairs.

"Opportunities frequently come up from our employees, and we aim to stay open to everything, as long as it allows us to provide strategically sound thought leadership in key verticals and execute well."

VENUS Cybersecurity: Taking a different view

Increasingly, organizations are being designed to address specific needs, rather than simply following tried-and-true models. VENUS Cybersecurity—a not-for-profit based just outside Ottawa—was created in response to the 2012 Auditor General's report, which pointed to the federal government's shortcomings in adequately addressing threats to Canada's critical infrastructure and its failure to develop key cybersecurity partnerships. Based on a 2013 technical report by Carleton University professor Tony Bailetti and senior members of Communications Security Establishment Canada, VENUS was created



to "look at Canada's cybersecurity challenges differently." Director of Business Development Jeffrey Tracey says: "We want Canadians to see the internet as a way to empower their lives, not constantly chasing a protection fix and concerned about their security."

ITAC Online: *For ITAC members, either in the cybersecurity space or just those with an interest in security, what are the advantages of joining VENUS? What can it help them achieve?*

Jeffrey Tracey: VENUS is one room with three doors of entry, as Members, Partners or Sponsors. For Members there are five classes of membership and Members are provided with the VENUS platform (office space, R&D facilities, test bed) and top knowledge talent in cybersecurity (from our VENUS Institute). Engagement with VENUS can be accomplished as a paying Member (Members drive Lead Projects and get a voting seat on the Board of Directors). VENUS allows organizations to work on internal projects and solve problems that could not be solved on their own. VENUS is a not-for-profit company that wants its Members, Partners and Sponsors to solve Canada's top cybersecurity challenges and increase their revenues through project-related work, and then replicate that to international markets.

What is the advantage for VENUS, or for its objectives, of the partnerships the organization has with the various levels of government and Carleton University?

VENUS is a private-sector led company, allowing its Members to drive Lead Projects. Partners include organizations that want to support multiphase, or multiyear missions. Current partners include CSE, NRC, North Carolina State University's Laboratory for Analytic Sciences, City of Ottawa, Ontario Centre of Excellence, City of Niagara Falls and others. Partners most often engage VENUS with in-kind contributions or funding to support projects. CSE is not only a founding member of VENUS, but is a very important Partner. Our partnership with the Laboratory for Analytic Sciences at NCSU is very important. The LAS is the largest of six NSA-funded cybersecurity labs in the US. VENUS has developed direct links and is undergoing project work with the LAS.

How can your R&D arm help ITAC members achieve their own goals?

VENUS allows organizations to work on their specific internal cybersecurity R&D challenges using VENUS resources (talent, test bed, facilities). For a fraction of the cost of what a company would spend on internal R&D resources, VENUS can offer up to a 10:1 return on investment, using our existing network of resources and infrastructure. VENUS drives a think tank of top cybersecurity and academic experts (government, industry, academic) through our VENUS Institute. Currently housed at Carleton University (but not exclusive to Carleton), the Institute is currently hosting a Masters-level cybersecurity course now being taught at Carleton. The aim of the course is to create new talent of cybersecurity experts for introduction into the private sector. This new talent will ultimately develop new ideas and innovative technology in cybersecurity.

What is your goal for creating new companies through VENUS Ventures and accelerators?

VENUS aims to create over 2,000 jobs in cybersecurity by 2018 and educate over 500 cybersecurity experts. VENUS Ventures has been created to provide capital support and space to new ventures in cybersecurity. VENUS currently has four start-up cybersecurity software companies in its facilities in Orleans. The City of Ottawa and the Ontario Centre of Excellence are founding members of VENUS, and VENUS enjoys the support of the city and OCE to promote new start-up companies. It is anticipated that with the increase in new cybersecurity talent through the VENUS Institute, and with the project-related work by Members, new technologies will be created and new ventures formed to commercialize that technology. VENUS has the network to not only ensure that any new innovation in technology is focused on Canada's cybersecurity challenges, but to also grow and commercialize. VENUS has room for over 35 R&D resources in its new facilities in Orleans, is about to commence Phase 2 of our building (for Open Source Research) and is looking at potential space in Ottawa's planned Bayview Yards Innovation Centre. VENUS also has plans to start-up six new accelerators for new technology across Canada.

What types of projects are currently underway? Could you provide some details on a couple of them?

VENUS is currently working on six Lead Projects, all Member-driven.

The Cybersecurity Maturity Model for Municipalities (modelled after SCI's Capability Maturity Model), is now underway in two Ontario municipalities. The objective is to assist Canadian Municipalities to recognize their cybersecurity responsibilities (protection of networks, critical infrastructure, municipal data) and to assign a "level" of readiness for all municipalities in Canada. This level of readiness will recommend what vendor-supplied technologies will be required to achieve adequate protection. This approach will then be implemented across Canada, and then packaged and sold by VENUS Members to international markets.

VENUS recently approved a Lead Project called the Quantum Technology Roadmap for Canada. VENUS, through the National Research Council and the Institute for Quantum Computing at the University of Waterloo) will develop an approach to look at what quantum technology (Canada is a world leader in quantum science) would be best to commercialize. This includes quantum cryptography, quantum key distribution and quantum random number generation.