Budget 2014: Re-balancing Innovation Support Programs
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Opening Keynote

Innovating with Air, Sand and Water on The Rock

Harold Warner, President, Dynamic Shelters

Warner began by examining the various ways he responds to the concept of an entrepreneur. “My experience is that people will sometimes react differently to that title. To some people, an entrepreneur is just someone who’s running around trying to make a buck off the last good idea. To others, you’re the backbone of the new economy.” By way of resolving these conflicting images, he sees entrepreneurs as balancing three aspects of their minds: the analytical, the creative, and the productive.

Warner cited safety, accuracy, and innovation as the core values of his company, which he established in the combined communities of Fortune/Grand Bank, Nfld., an area that was heavily dependent on fishing. When he opened his first plant in Grand Bank in 2004, the town of 4,300 residents had an unemployment rate of 48.5%. In Calgary, where his business is based, there was only 2% unemployment. The hunger for jobs in Newfoundland was palpable. “There were people who hung on the fences the day I was in town, to make eye contact, because they wanted jobs.”

Because such a huge portion of the province’s population has gone elsewhere for work — primarily Fort MacMurray — Warner wound up with 65% female staff, and an enviable turnover rate of around 4%, which he insisted were not anomalies. He therefore had no hesitation about investing in considerable training to provide these employees with the necessary skill sets, such as vinyl welding, a specialty that can take a year to learn.

“Our business model was not to go there and see if we can get people to work as cheap as we can,” he said, noting that the company had a zero accident rate in 2013 and was honoured as a Newfoundland Employment Council Business of Distinction. “The reason we are distinguished in our employment program is because we make sure that our pay scale is a little bit above what’s going on around us.” Warner’s company also features a profit-sharing program and health benefits. They have even been able to bring on people with apparent mental or physical problems and turn them into highly valued and productive employees. Nor are they even in Newfoundland because it represents a major market; in fact, all of Canada represents less than 25% of the firm’s market, while more than half of the primary suppliers are Canadian.

“I’m telling you all this so that you know it worked.”

The company got its start making balloons for major events. His balloons included a number of innovative designs such as dinosaurs and cows. The knowledge and skills that went into this enterprise have since been transferred to making different types of inflatable ground-based shelters. These are safe, secure, and eminently portable, as evidenced by the example of a field hospital that five people were able to set up in less than an hour and a half. The firm was also able to construct isolation wards for patients during the SARS epidemics, to keep hospital staff from be-

coming infected. A similarly unusual product is an inflatable walkway that makes it possible to walk over land mines without detonating them.

Part of the rationale for this line of work has been the fact that most fatalities and injuries occurring on the scene of major catastrophes are caused by collapsing structures, not by explosions of any sort. Warner's structures are highly resilient to blasts and impacts, as he illustrated in videos of test sequences. He also showed videos of what happens in a conventional structure as it comes apart, illustrating just how hazardous they could be to their occupants.

Dynamic Shelters has designed its air shelters to serve as resilient structures with no internal breakable members that could injure occupants during calamity. The structure deforms but recovers, and occupants are not harmed at all. The company has also developed a type of cellular, cardboard-like structure for walls, which successfully absorbs direct hits from mortar shells.

Such testing regimes have allowed the company to explore other possibilities, such as creating inflated structures in the ocean to deal with problems like sunken vessels leaking oil. The same basic principles also introduce the possibility of constructing these shelters on other planets, as well as hostile conditions here on earth. In some cases these structures serve as elaborate "gas masks" for people working on an industrial site, who may have nowhere to turn in the event of an accident that releases toxic agents. Ultimately, Dynamic Shelters became the sole source firm to meet the needs of industry and the military.

Warner credited various agencies with seeing the company through the long and expensive R&D process that led to these achievements. His list included the National Research Council, the Atlantic Canada Opportunities Agency and the federal SRED program. He was not initially inclined to seek out this kind of funding, but became persuaded when he saw how large a research budget it supported. "It worked for our company, it worked for a lot of people in Newfoundland, and it's fostered another business in the United States."

That being said, he bemoaned a general shortage of testing facilities, which he blamed for holding back a great deal of the country's R&D progress.

"There are all kinds of ideas out there with young entrepreneurs, but they don't know how to test them," he said, insisting that testing represents the essence of innovation. "You've got to break it to know how to build it well. You can't do that just by building it and putting it on a store shelf. You have to bust it."

Crelinsten subsequently asked Warner about how he responds to people seeking to invest in the firm. Warner recalled when Dynamic Shelters was featured on the Discovery Channel, he was approached by someone who was disappointed to learn that the company was fully private. "That's a tremendous compliment," he said. "Don't think for one second that I'm hung down and

don't know what to do with all the money. We have a business that brings me a new challenge every day."

Celine Bak asked if the Atlantic Accord has made an impact on the business, and speculated that it would benefit companies like his to have a television reality show that outlined the challenges facing them and how they were overcome. Warner acknowledged that oil development has transformed the economic life of the east coast, but this has not directly affected his business, since so little of their market is there.

Further to her point about creating a reality show, Warner agreed. "The real experience is irreplaceable, and people have to see it, identify it, and connect with it." He noted that he was looking forward to mentoring others.

Bert Van Den Berg followed up on this concept of the value of experience. Warner responded that the educational system was now doing much more to be welcoming to smart individuals who were not necessarily academically inclined, but he noted a prominent statistic that most entrepreneurs are drop-outs. He proposed sponsoring young entrepreneurs in a business activity that would call for research under real-world conditions. "To actually create a project as opposed to creating an experiment, and being responsible for it financially; boy that would be live-fire training."