

Industrial Innovation from Our Side

By Janet Plante

Davco Solutions Inc CEO

Welcome to the wonderful world of industrial innovation. In northern Alberta, Canada we have always done with what ever is at hand. It is a culture that has developed. When you have to wait weeks for what you want you get accustomed to either doing without or finding a solution out of what ever is at hand. This makes for some pretty innovative people. It's no wonder we have more patents per capita in our region than in the rest of Canada. Our roots are in the land and our industry comes from that, agriculture of course but forestry and oil & gas as well. Understandable then that we are quite practical and we know that simple is better - after all we did not have the luxury of making things complicated.

Davco has been part of that innovation since 1972. Our path has been one of finding opportunity in problems. That old proverb 'Necessity is the mother of invention' mirrors our culture. Interesting though we find ourselves in an environment where this skill or talent is somewhat abundant therefore its value is diminished. One of our more talented engineering techs used to say 'you can't put a price on a solution' but somehow in this area that price is significantly lower than it is in other areas. I don't think we understand what we have.

The last ten years have seen the speed of business increase significantly. At Davco we have done our best to use that innovative culture to keep up. When you are leading the way sometimes you make mistakes but consider - what you are really doing is creating experience. Everyone makes mistakes it is how you react to those mistakes or really those 'opportunities' that defines you. In 2006 when we changed our name from Davco Machine Ltd to Davco Solutions Inc we felt we were really defining ourselves. It gave us the sense that not only our customers would better understand the innovative culture we had but that we would better understand it as well.

Inventors are a rare breed. I believe they can SEE it, like 3-D modeling in their head. Combine that with the practical hands on experience and some tools like a welder, lathe or a milling machine and now throw in a process that isn't working and you have a real opportunity to come up with a solution. Back in the day every machine shop in Grande Prairie had guys like that, perhaps most of them still do. When it came time to charge the customer for that solution well you can charge them for what they see, the time you took to assemble it but how can you charge them for thinking? You weren't actually doing anything were you? So an expectation was born.

I understand in the large companies they have a department of Design Engineers and then a separate department of Manufacturing Engineers. No wonder things become complicated. There is a world of difference between what should work and what really works. You just can't grasp that until you feel that frustration for yourself. Usually it comes down to the little things. Don't get me wrong, both

departments are important and the 3-D computer modeling has done wonders but there is no substitute for having the experience in both worlds.

Before we had access to the 3-D computer modeling our more complicated projects were all done with AutoCAD in 2-D and then prototypes were constructed. Occasionally this happened in reverse although I wouldn't recommend that as steel is way more expensive than paper. Sometimes those first prototypes were life size wooden models like the first Ultimate Harvester. Now this was a sweet machine, timing wasn't right unfortunately and a victim of a downturn in the forest industry much like what we are experiencing today. In this case the Ultimate Harvester didn't disappear entirely as a version of the original is still being manufactured by Quadco out of Quebec.

It makes sense to me that something new needs to be seen before people can understand. As I referred to before I believe inventors can see it in their mind but for the rest of us we need to be convinced. The first Davco Twin-Cut Sawmill was a model made from wooden dowelling. It measured about 3 feet long and 1 foot wide completely done to scale. It was wonderful to watch 'the light bulb go on' when someone saw it. Before that the reaction was more of a 'huh?' How else do you show something that doesn't exist? Have you ever explained something to someone and then they go away and do it? The results are often very different than you expected, occasionally better but how frustrating if it isn't what it needs to be. Models can bridge that gap.

A 3-D computer model still needs to be designed. The person using the keyboard now is the one that needs to see and often that is not the inventor. Customers come to us with an idea or a concept and somehow we need to see what they see. How quickly this happens depends on the skills of the customer but also depends on the skills we bring to the table and here is where the experience comes in. The adult brain operates by drawing on what they have seen before. As with a lot of inventions the Davco Twin-Cut sawmill is mostly made up of processes and components that are readily available. For example there is nothing new in the way we handle the waste or the lumber product but what is innovative (and patented I might add) is the multi level compact way we do it. Innovation comes in many forms not always something totally brand new but sometimes just a different way of doing the old.