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Business Matters

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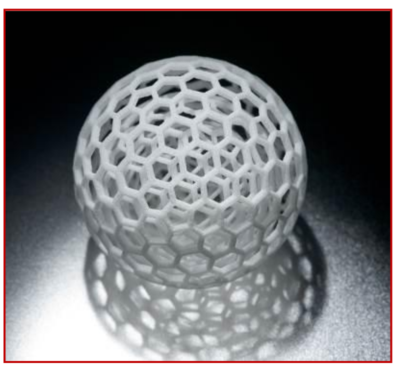
TECHNOLOGY

Three Dimensional Thinking

3D printing may have significant value for the future of your business.



Just when you have finally figured out all the functions on the photocopier or become familiar with AutoCAD or Photoshop, along comes the new benchmark in creativity – 3D printing. Now, let's not confuse 3D printing with 3D movies, holograms or those terrible "3D" postcards of Elvis.

What is 3D Printing?

3D printing is actually a process whereby a digital design can be used to make a three-dimensional object. In the past, machining (subtractive manufacturing) was the most common manufacturing method: unwanted material was removed as a solid block of material was cut or drilled to shape the desired object. In contrast, 3D printing is an additive manufacturing process that starts with nothing and builds the product by "printing" or depositing layers of material to the specifications shown on the digital design. Materials range from thermoplastics and polymers to ceramics, glass and metals, depending on the technology used, although systems that work with glass and metal directly are considerably more expensive.

The printing process uses three-dimensional models created using CAD (computer assisted design) or 3D animation software. A 3D printer converts the 3D model into a series of thin cross-sections which it then "prints" layer by layer using a nozzle and melted material such as plastic or resin. More advanced systems have the ability to insert colour into the model and print 3D text, graphics or logos directly onto the model. The machines operate using existing operating systems but require special software to be installed. Some commercial machines have a reasonable footprint ranging from the size of a bar fridge to that of a bedroom dresser. Open-source projects have created smaller desktop-sized models, more like a home laser printer in size; however, these tend to require some assembly and soldering.

The Cost

As with so many new innovations, the initial buy-in cost has been too high for most entrepreneurs. Now, however, prices are coming down and one can expect to see more and more of these machines available for everyday use in owner-managed businesses. As with a paper printer, the cost is heavily influenced by output, speed and other features. Low-cost 3D printers that create solid objects, albeit not in great quantities or necessarily large, can start in the $1,000 range. However, machines that can create larger objects, use more complex materials or are faster can cost up to $250,000.

3D printing can replicate hard-to-find replacement parts.

Who Needs 3D Printers Anyway?

If you think that these applications are not for your business, consider:

- Prototypes can be designed that provide exact size and feel for determining the ergonomics of proposed handheld objects such as cell phones, keypads, game consoles, etc., to determine whether required components will fit and how they must be engineered.
- Imagine the instructional and educational benefits that come with 3D printing of model buildings. 3D products could then be used to visualize how the placement or design of a building would be affected by winds, pedestrian or vehicular traffic when placed amidst existing structures.
- Making moulds or patterns for casting within your own building allows greater control of the overall development process and provides the ability to experiment with changes without the cost and delays associated when using a third party.
- Imagine being able to reproduce a synthetic hand, foot or ear, whether to assist in prosthetics or to reproduce life-size body parts to determine how any wearing apparel from hats to shoes would fit.
- Just think how great it would be to be able to replicate an old headlight cowling for a vintage automobile or any other hard-to-find replacement part for older equipment.
- Those involved in landscaping will be able to take data from a geographic information system (GIS) and create 3D cityscape models for presentation to clients so they can see how changes will impact existing structures or geographic features.
- 3D viewing of advertising will be the wave of the future as more and more clients will want real life models or hand-outs to provide to their potential customers. Perhaps the days of two-dimensional advertising will slowly fade away just as printed photographs have been replaced by electronic imagery.
- 3D printers represent the natural evolution of technology. Consider that at one time musicians had to attend studios to lay down tracks for an album at a cost of thousands of dollars while today's musicians can save and mix tracks on their personal computer and then distribute their music by selling it online or burning their own CDs/DVDs.

Final Words

Whether or not your business needs to own its own 3D printer will be a matter of the type of business you are in and the service or product prototypes you may wish to produce in-house. One thing is for certain though: at some time in the near future all businesses will be impacted by 3D printing, just as they were by the availability and accessibility of paper-based printing. Perhaps it's time for you to determine the advantages and opportunities 3D thinking may have for your business, its productivity and its future.

TAXATION

It's That Time Again

Make sure you can find all the documents supporting income and expense claims for your personal income tax filing.

Yes, it's already time to start reviewing the past 11 months of 2012 to prepare your personal income tax return for 2012. There are hundreds of areas to consider but here are a few situations that affect the owner-manager.

Ensure All Source Documents Are Available

Owner-managers should take a business-like approach to their personal returns. Many factors go together to determine the amount of income tax payable, for example, personal exemptions, investment tax credits, pension deductions, new home buyer credit, Canada employment amount, etc. The list is extensive, but the bottom line is that you want to benefit from all potential deductions and tax credits. This is where your chartered accountant can help you. Just ensure that you keep all relevant documents throughout the year so you are well prepared when your income tax filing is due. Incomplete documentation may create needless expense when your CA has to bring the missing documents to your attention and you have to spend time looking for them. Should a CRA audit find expense claims unsupported by original documents, it may disallow the claims and charge you interest on reassessment. The more information you can provide to your chartered accountant, the more likely any available tax savings will be maximized.

Claims Amounts

Claims calculations are based on either earned income (income from employment or self-employment) or net income (income after the deduction of employment, property and business losses). Earned income determines the claims for child care and RRSP contributions; amounts claimed for medical expenses, HST/GST and the amount of money withheld in the clawback from any Old Age Security payments are all based on net income.

Review Investment Portfolio

Look at any investments held outside your RRSP to determine whether you should be realizing any capital gain or loss. Selling investments with market values less than the adjusted cost base (original purchase price plus broker's fees) will create a capital loss while selling investments for more than their adjusted cost base will create a capital gain. Capital gains and any capital losses that can be used to reduce them affect your taxable income and thus may influence how much remuneration you might want to draw down from your company.

This may be the year to use capital loss carry forwards.

In order to decide whether to create a usable capital loss or take a taxable capital gain into income, you need to have a closer look at the size of this year's capital gains and your previous year's personal income tax return. If, for instance, you have taken capital gains for 2012 greater than your capital losses for the year, selling the losers may be advisable to reduce the tax impact of the capital gains. If, in addition, you have capital loss carry forwards from previous years, this might be the time to use them.

Deferred Remuneration

Businesses often defer compensation calculations at the end of their fiscal year. A business can create the expense and the obligation to pay bonuses in 2012, but employees do not have to record the income until it is actually received. Thus, even if a business year end was September 30, the business could record the expense in the fiscal year ended at that date, and the employee could record the bonus income in the calendar year following. (The company must pay the bonus within 180 days of the fiscal year end or it will not be able to declare the bonus as an expense.)

Owner-managers should carefully review the deferred compensation arrangements from the previous fiscal year to determine any deferred remuneration in the current year. Consider the impact deferred compensation may have on the current calendar year's income. Also, consider this calendar year's remuneration in conjunction with any bonus deferrals that occurred in the company's last fiscal year.

RRSP Contributions

As an owner-manager, you may wish to use RRSP contributions to control personal taxable income. You should review the RRSP section of the tax return compiled by your CA and the Notice of Assessment sent by the CRA after last year's filing. Knowing specifically the amount of the eligible RRSP contribution will provide you with information that will avoid overcontributions and will allow you to determine optimum remuneration that should be paid to maximize RRSP contributions while minimizing your personal tax liability. The maximum RRSP contribution for the 2012 calendar year is $22,970. Unused contributions accumulated since 1991 can be added to the eligible 2012 amount. Accumulated unused contributions may enable owner-managers to pay themselves larger bonuses and, at the same time, offset the increase in taxable income created by the bonus.

Income Splitting

Owner-managers have a unique opportunity to reduce individual income tax liability by paying family members reasonable salaries for working in the business. Assume that an owner-manager takes $80,000 per year from the business, has no other deductions, has dependent 16-year-old twins and a spouse without income. The basic tax for an Ontario resident in this situation approximates $16,215 (using 2011 tax tables).

If, however, each child earns $6,000 working at the company, the spouse earns $30,000 and the owner-manager earns $38,000, even though the family income remains at $80,000, the taxable liability as a family unit is reduced to an approximated $8,129.

You must view income splitting in the context of total income from all taxable sources. Income splitting that creates income in the hands of some other family member could affect the size of Social Insurance payments and the tax rate paid on withdrawals from RRSPs. Income splitting will also impact other tax credits and deduction limits that may be allowed.

Deductions and Calculations That Are Often Missed

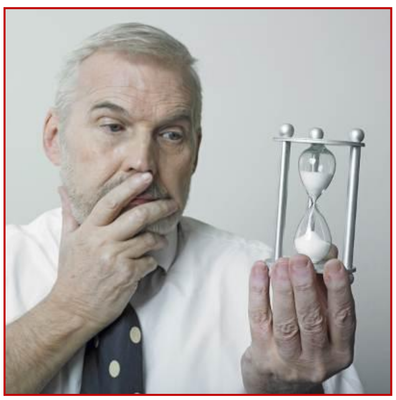
The CRA allows two kinds of allowance for employee-owned vehicles used in an employer's business. The flat-rate allowance is a fixed amount not related to the number of kilometres driven. This kind of allowance is a taxable benefit in the hands of the employee. Because this allowance is a taxable benefit, it is also pensionable and insurable and creates a deduction for CPP, EI and income tax. The company is allowed to deduct the reimbursement as an expense.

The second kind of allowance recognized by the CRA is a per-kilometre rate for the distances driven on company business. For 2012 the rate was 53¢ per kilometre for the first 5,000 kilometres driven and 47¢ per kilometre thereafter. For those employed in the Northwest Territories, Yukon and Nunavut, add an additional 4¢ per kilometre to the rates provided. It is important to keep track of your GST/HST amounts in order to calculate your Input Tax Credits (ITCs). ITCs can be claimed by the employer on the GST/HST included on the receipts submitted by the employee for reimbursement of expenses incurred by the employee for mileage driven on company business. It is easy to lose track of the ITCs through careless bookkeeping.

MONEYSAVER

Your Future Is Now

Prepare the transition to a RRIF well ahead of time.



During your working life the federal government allows you several ways to accumulate tax-deferred money for your retirement. In the end, however, the government wants to recover at least some of the taxes you didn't pay on the earned income that built the funds. If you have a Registered Pension Plan (RPP) at your place of work, you will pay income tax on the monthly benefits paid after you retire. If you have a Deferred Profit Sharing Plan (DFSP), you will pay tax on your withdrawals. If you have a Registered Retirement Savings Plan (RRSP), you must ultimately create a Registered Retirement Income Fund (RRIF) from which you must withdraw taxable amounts according to a schedule. You can also create or add to a RRIF from your DFSP and your RPP if they allow lump-sum withdrawals. These withdrawals can be made tax free if the funds are rolled over into a RRIF.

If you are considering retirement within the next five years, the following may help in determining your financial strategies. The focus here is on the rollover of the RRSP.

1. There is no minimum age for setting up a RRIF. It must, however, be set up no later than the end of the calendar year in which you turn 71. You can also make your last eligible contribution in that same year. You convert the RRSP to a RRIF by asking your financial institution to fill out the forms and make the registration for you. When that is done, the balance of the RRSP is simply rolled over into the RRIF. Compulsory withdrawals from the RRIF begin the following year. Funds remaining in the RRIF continue to be tax sheltered until withdrawn.

2. Once a RRIF is established, additional contributions cannot be made.

3. Withdrawals are made according to a schedule established by the Canada Revenue Agency (CRA). You do not have to use your own age as the basis for the calculation of the withdrawal rates, however. For instance, if you are 71 and your spouse is 66, you can choose your spouse's birth year. Since early withdrawals are made at a lower rate, it is advantageous to use the spouse's birth year. If you are going to

use the age of a younger spouse, you must inform the financial institution before the first withdrawal; you cannot make a change after that.

A younger base age may allow the older spouse not only to reduce taxable income but also to avoid the clawback of Old Age Security that begins when total annual income exceeds a threshold amount set by Service Canada. For 2012 this amount is $69,562.

4. A RRIF can hold the same types of investments as your RRSP. Your non-cash RRSP holdings can be transferred to the RRIF "in kind", i.e., without converting them to cash.

Any withdrawal above the minimum is subject to withholding tax.

5. If you withdraw more than the scheduled minimum, your financial institution will withhold a portion of the excess and remit it to Ottawa on your behalf as income tax. The amount of tax levied on the excess amount is:
   - 10% on the first $5,000 (Quebec 21%);
   - 20% on any amount between $5,000 and $15,000 (Quebec 26%);
   - 30% on any amount above $15,000 (Quebec 31%).

6. To provide an idea of how the minimum withdrawal looks on paper, imagine that you turn 71 in 2012, roll your $100,000 RRSP into your RRIF and start withdrawing in 2013. Over the next five years the value of the RRIF is reduced to $69,071.

Year	Age	Capital Amount	Mandatory Withdrawal	Actual Dollar Amount	Capital Remaining
2012	71	$100,000			
2013	72	100,000	7.48%	$7,480	$95,520
2014	73	95,520	7.59	7,250	88,270
2015	74	88,270	7.71	6,806	81,464
2016	75	81,464	7.85	6,395	75,069
2017	76	75,069	7.99	5,998	69,071

And so it continues until age 94 when the withdrawal rate reaches 20%, where it remains for the rest of your life.

7. Upon the death of the RRIF holder (referred to by the CRA as "the annuitant"), the balance of the RRIF may be transferred to a qualified beneficiary for their own RRSP or RRIF, or for the beneficiary to purchase an eligible annuity. There are no tax consequences as long as the appropriate CRA forms are completed indicating a direct transfer of the funds by the financial institution managing the RRIF for the deceased. Transfers to an RRSP are only allowed if the qualified beneficiary is 71 years of age or under. If the beneficiary is older than 71, the transfer must be made to a RRIF or annuity.

8. Your RRIF may be self-directed if you are not interested in having investment advisors handle your funds. Naturally the RRIF must be held at a bank, credit union, trust, or insurance company that will register the plan with the CRA, administer the distribution, and handle the transactions of buying and selling investments. You cannot hold RRIF investments in your own name.

Continued Tax-Free Savings

Of the amount withdrawn from the RRIF, $5,000 can be moved into a Tax-Free Savings Account (TFSA) annually where it is once again sheltered from income tax. Funds can be withdrawn from a TFSA account without paying income tax.

Review Sources of Income Before Retirement

No one can determine how long they will live, the income they will need for retirement or the rate of return on investment over the long term. On the other hand, no one wants to outlive their money. To get some idea of reasonable expectations in these areas:

- review your RRIF portfolio at least annually;
- determine the minimum withdrawal level required each year;
- estimate the rate of return based on the last five years of your RRSP;
- establish other sources of income; and
- discuss the income tax impact with your chartered accountant.

Once the capital gains and near-term rate-of-return prospects have been estimated, your financial advisor along with your chartered accountant will be able to assist you in defining the funds that will be available to meet living expenses. Evaluating the available funds and calculating living expenses will tell you whether you will need to continue to earn income in your retirement years.

MANAGEMENT

Before You Say Yes, Understand The Risk

Family members must understand the responsibilities and risks associated with becoming directors of a family-owned corporation.

Know What You're Getting Into

Incorporation of an owner-managed business requires shareholders to elect a board of directors to assist in managing the affairs of the company. The owner-manager will almost certainly be elected as well as a member of their family. In many instances family members allow themselves to be elected director simply because they want to help keep family control of the business. Unfortunately, all too often these family members have little business experience and only a minimal understanding of the onerous responsibility and contingent risk that the position of director carries with it.

Excerpts from the *Canada Business Corporations Act* (R.S.C. 1985, c. C-44) are typical of regulations in the provincial Corporations Acts in that they indicate the overall substance of responsibility of a director:

> 102. (1) Subject to any unanimous shareholder agreement, the directors shall manage, or supervise the management of, the business and affairs of a corporation.
>
> *Duty of care of directors and officers*

122. (1) Every director and officer of a corporation in exercising their powers and discharging their duties shall

(a) act honestly and in good faith with a view to the best interests of the corporation; and

(b) exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances.

Duty to comply

(2) Every director and officer of a corporation shall comply with this Act, the regulations, articles, by-laws and any unanimous shareholder agreement.

No exculpation

(3) Subject to subsection 146(5), no provision in a contract, the articles, the by-laws or a resolution relieves a director or officer from the duty to act in accordance with this Act or the regulations or relieves them from liability for a breach thereof.

Be Aware of Personal Liability

Perhaps the most important area for inexperienced directors of an owner-managed business is Section 122. For instance, directors may be held accountable if they fail to ensure that a corporation maintains proper books and records or fails to file required forms or make payment to regulatory authorities (all of which would be done by a reasonable and prudent individual).

Directors can be held personally liable for breaches of duty.

It may come as a surprise to many that directors can be held personally liable for breaches of duty in such areas as mismanagement of corporate assets, financial losses, wrongful dismissal, employee discrimination or failure to address environmental issues for which the company could reasonably be held responsible.

The legal cost of a director's defence when named in a statement of claim against the company may be advanced or reimbursed by the corporation as long as it is determined that the director:

124. (3)…

(a) acted honestly and in good faith with a view to the best interests of the corporation, or, as the case may be, to the best interests of the other entity for which the individual acted as director or officer or in a similar capacity at the corporation's request; and

(b) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that the individual's conduct was lawful.

The federal *Act* provides that the company can carry insurance to protect the director against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of that association with the corporation or other entity.

Insurance

124. …

(6) A corporation may purchase and maintain insurance for the benefit of an individual referred to in subsection (1) against any liability incurred by the individual

> (a) in the individual's capacity as a director or officer of the corporation; or
>
> (b) in the individual's capacity as a director or officer, or similar capacity, of another entity, if the individual acts or acted in that capacity at the corporation's request.

The role of director in a company, regardless of its size or province of incorporation places a burden of responsibility that most owner-managers are not aware of. It is incumbent upon directors to be aware of:

- the risk of negligence and the potential liability of all directors or other officers of the corporation;
- the need to insist that they are provided with all pertinent information they require to oversee the operations of the corporation;
- the statutes and regulations that the company is obligated to follow;
- the financial condition of the corporation at all times;
- the need to avoid any conflict of interest. A director should have no task outside their responsibility as director that could interfere with their responsibility to the company;
- the need for rules and guidelines within the corporation to ensure confidentiality of not only all corporate documentation but all information concerning employees;
- the need to document the information used and the process of how major decisions were arrived at;
- the need to use corporate legal counsel in contentious situations to demonstrate that due care and diligence were exercised before the decision was made;
- their obligation to understand the operations of the corporation and to participate and communicate with management on all matters of corporate significance regardless of whether a director agrees or disagrees with the activities of management.

Get Legal Advice

The ownership and the directors and officers of family-owned businesses are usually one and the same. As such there is minimal risk of disgruntled shareholders taking the directors to task. However, outside entities, whether regulatory bodies or third parties, may not be so obliging. When family members are directors the corporation may have trouble convincing authorities that objectivity, confidentiality and corporate governance are not tainted by non-arm's length relationships among family members. If you are invited to become a director of a corporation owned by members of your family, get legal advice before agreeing to stand for election. In the long run, it is in the best interests of both you and the company to meet with your lawyer and discuss the best means of protecting the business and the family from both corporate and personal loss.

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