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Cover photo: Sointula, BC by James Ruttan

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Connecting the dots

A message from our President

By Norm Ruttan



What's wrong with "the system" and how can we fix it?

Since 1972, I've worked in the environmental field, and over and over again I've heard the same refrain: "I'd like to do the right thing, but the system won't allow it." As a National Parks manager and superintendent, a UNESCO Biosphere Reserve leader, and finally as the owner of iWasteNot Systems, I've given this some thought.

Why doesn't "the system" work better? Why isn't it easy for everyone to reuse, recycle and live a more sustainable lifestyle?

While I think that some of it has to do with our economic system, and the perverse incentives it provides us to be wasteful of energy and resources, another part derives from how we govern and manage our activities in this complex world.

Our federal, state and provincial, and even municipal governments follow the University or Military model of organization, where we divide and sub-divide the world into ever finer bits. So for example, within government we have the agriculture department, economic department, health and human services department, energy department, department of the interior or environment, etc. And then within the environmental department(s), we divide policy and activities into parks (federal, state & local), human ecology, wildlife, climate, fisheries, forestry, etc. And then we break that division down again and again. And then we end up with someone somewhere delivering a microscopic portion of the program at the level where everything happens...the community.

This may result in one department of one agency such as the department of agriculture draining wetlands to improve farmland, and another department of another agency such as fisheries and wildlife restoring wetlands to improve wildlife habitat.

This is 'dis-integrated' government (and it happens with business and non-profits also). The left hand often doesn't know there's a right hand, and if it does, they don't act together, or worse yet they struggle with each other. Without communication and consideration of what everyone is working on, we govern, and carry out our business and non-profit activities in a disintegrated fashion. Unfortunately, for the most part, we have very few 're-integrating' mechanisms.

But ecosystems and human ecology work in an integrated fashion. We can't divide our lives into parts. Nature isn't divided into neat compartments like agriculture, air, water, fisheries, forestry, etc. So, in recognizing this, iWasteNot Systems in our own small way, works at the community and regional level to provide tools to 're-integrate' efforts.

In the food arena for example, through our SharedHarvest exchange software, we

continued...



Going Green

Out of 120 large companies in Norway, Denmark, Finland and Sweden with a turnover above 80 million Euros, 90% had implemented environmental programs, including:

- reductions in energy consumption – 93% of firms
- waste – 83% of firms
- direct emissions – 67% of firms
- reductions or changes in material usage – 78% of firms

(Source: Norden.org, August 2008)

Connecting the dots ...continued

connect providers and retailers of food with consumers, residents, restaurants, institutions, etc. . . linking together sources and sinks of food waste so that food can be rescued instead of land-filled.

As another example, the exchange software for ManureTrader.org in Pennsylvania helps prevent an abundance of manure in one part of the state from polluting watercourses, and at the same time provides badly needed nutrients to another part of the state to replace expensive fertilizer.

clients use our software to re-connect

And in British Columbia, the Recycling Council of British Columbia (RCBC) has taken the lead in partnering with various agencies to reduce the province's collective environmental footprint by networking the online residential exchange software for household materials, with industrial and electronic materials exchanges at bc.reuses.com. We highlight the RCBC's efforts and progress in this issue of *Renew*.

iWasteNot Systems clients use our software to re-connect service agencies together at the community level so commonsense group decisions can be made by a network. We're proud to be part of the solution to re-integrate efforts in several hundred communities throughout North America.

Food for Thought

More than 40% of all food produced in America is not eaten, amounting to more than 29 million tons of food waste each year, or enough to fill the Rose Bowl every three days. Nationwide, food scraps make up 17% of what we send to landfills.

(Source: Cullinate.com, "Food waste: out of sight, out of mind" by Jonathan Bloom, November 19, 2007)

Organic materials that decompose in landfills can produce methane gas. Often called landfill gas, methane is 21 times more potent than CO₂ as a greenhouse gas. The best place for organic materials is in a composting facility, a bio-digester or an energy extraction facility.

(Source: Environment Canada – Greenhouse Gas Inventory 1990-2000)

Pennsylvania's 55,000 farms produce more than 4.4 million tons of manure each year. A cow weighing 1,000 pounds can produce 106 pounds of manure each day. A flock of chickens weighing 1,000 pounds will produce 22 pounds of manure. Manure is ripe with opportunities for more and more nontraditional uses.

(Source: Pittsburghlive.com, Manure website offers fertile guide to PA farmers by Craig Smith, August 13, 2007)

Energy produced from cow manure at an Ottawa Valley dairy farm won a \$50,000 innovation award from the Ontario government in 2007.

(Source: CBC.ca, Toronto Zoo wants to turn manure into energy, November 15, 2008)

iWasteNot fights food
waste with new online
food exchanges.
Learn more at
www.sharedharvest.net.



Making a Market

The Value Ladder and the High Price of Gas

By James Ruttan



Sometimes it seems as though, no matter how many times they hear the message, people will not shift their behaviour in the face of an impending environmental disaster.

While this is not entirely true and some people are making substantial changes to their consumption patterns and lifestyles based solely on conscience, the reduction in environmental impact is just a drop in the eco-bucket as the rest of us continue to use it up and throw it out at remarkable rates.

Is the situation hopeless? No.

The recent spike in gasoline prices reveals the route out and affirms one of the central premises that iWasteNot Systems was founded on: economics can drive mass behaviour change much more directly and quickly than any moral imperative.

Studies have shown that high gasoline prices are beginning to change driving consumption patterns. Government figures show that Americans are driving fewer miles, a decline not seen since at least 1983. And they are consuming less gasoline for the first time since 1991.¹

An iWasteNot waste exchange system depends on this dynamic to change behaviour through a mechanism we call The Value Ladder. The basic assumption underpinning the Value Ladder is this: people will not throw out valuable materials.

Waste material, by definition, has no economic value. If it did, people would sell it and it would no longer be considered waste that needed to be disposed of. In fact, waste typically has a negative economic value because the producer must pay to get rid of it. Instead of creating a product which can be sold, waste producers are creating a cost for themselves.

Moving from Disposal Costs to Zero Economic Impact

Here's where we step onto the first rung of the Value Ladder. When these producers list their waste material on an exchange and make a successful exchange, they have moved the dollar value of the material from being negative to being neutral. The material transitions economically from being a disposal cost to having zero effect on the bottom line. In and of itself, this is a powerful argument for producers to choose a better end for their waste than the landfill.

economics
can drive mass
behaviour change

Catalyzing a Market

But there are more rungs on this ladder. An exchange system is essentially a marketplace. As the exchange catalyzes a nascent market for material that would otherwise be wasted, competition will ensue between waste consumers. Eventually, waste consumers who wish to acquire supplies from this market will be forced to pay for it. The value will be low, at first, but slowly the value of these waste materials will rise. Any waste producer would be unwise not to sell their material at this point and as a result nothing will hit the landfill. At this stage of the more mature market, we are approaching zero waste by having steadily pushed the material up the Value Ladder.

[continued...](#)

¹ Providence Journal, July 2008: High gas prices keeping many closer to home by Timothy C. Barman (www.projo.com/business/content/bz_july4_gasoline03_07-03-08_RRANI39_v32.3da77d4.html)

Making a Market ... continued

If this material is all potentially so valuable, you may ask, why doesn't it just climb up the Value Ladder on its own? What role does an online exchange play in all this? The answer comes in the form of two factors: aggregation and transaction cost.

Access to Aggregates of Local Materials

Some goods are of such low value that they are only economical to trade in large quantities. If you found a piece of gravel, you would not pick it up to sell it. However, gravel is bought and sold in large quantities every day.

business can get to **the point** of considering the economic **value** of "waste"...

Those who wish to sell gravel must find a source which is large enough and reliably continuous. Typically, this means finding a place where there is enough gravel in one spot and mining it.

Likewise, those who wish to sell recycled materials need a source that provides a substantial and ongoing supply. Typically, they focus on finding 'mines' or single sources, such as large companies, from whom they can regularly collect a lot of recyclables. However, competition for these 'mines' is getting tight.

An exchange system can provide a potential waste consumer such as recycling companies with continuous access to what would otherwise be small point sources of a particular material. By identifying these small sources in a local area the exchange allows this material to be aggregated to the point where it can become valuable.

A Mass Behavioural Shift

If people and businesses can get to the point of considering the economic value of "waste" before disposing of items or purchasing new supplies of raw inputs, then we may finally be able to close the loop. By pushing what was previously waste up the value ladder, we provide a powerful mechanism to decrease waste and discourage new consumption of raw resources.

Recycling and Reuse Add Value to the U.S. Economy

According to the U.S. Recycling Economic Information (REI) Study, the recycling and reuse industry consists of approximately 56,000 establishments that employ over 1.1 million people, generate an annual payroll of nearly \$37 billion, and gross over \$236 billion in annual revenues. This represents a significant force in the U.S. economy and makes a vital contribution to job creation and economic development.

(Source: www.epa.gov/epawaste/conserve/rrr/rmd/rei-rw/index.htm)

A number of businesses are enjoying lower tipping fees and increased revenues by giving their "waste" a second life through exchanges provided by iWasteNot Systems:

Alberta – www.cmex.ca
British Columbia – www.bcimex.ca
Pennsylvania – www.materialtrader.org
Georgia – www.scrapmatchga.org



A Love Affair With Zero Waste:

Relationship Advice from the Recycling Council of British Columbia

By iWasteNot Staff

Harvinder Gill is the Information Services Manager for the Recycling Council of British Columbia (RCBC) and recalls the most unusual listing she's seen on a materials exchange: "46 year old male, looking for love." Perhaps he should have added, "in all the wrong places!"

The RCBC says its materials exchange websites are "like a dating service for waste." Harvinder, who administers RCBC's online materials exchange program quips, "You may find love on one of our sites, but it might not be exactly the type of love you're looking for. We hope you fall in love with the 3Rs: Reduce, Reuse, Recycle, because that's what our exchange sites are all about!"

A Bit of History

Since 1974, the Recycling Council of British Columbia (RCBC) has been a strong voice for Extended Producer Responsibility in Canada's westernmost province. Its work with organizations and legislators has led to one of the most broadly based and successful product stewardship programs in the world.

The first such council in Canada, RCBC also provides programs devoted to public outreach and education with a zero-waste thrust, including seven online materials exchanges hosted by iWasteNot Systems, as well as their very successful Recycling Hotline – a free, province-wide information service on recycling, pollution prevention, waste avoidance, disposal options and regulations, which receives over 120,000 phone calls per year.

For more info, visit www.rcbc.bc.ca

Love at first sight: Surrey connects with RCBC to launch an exchange

The RCBC first established an 'offline' materials exchange using a database and telephone system which focused on Industrial and Commercial waste in 1985. The organization then branched into providing online exchanges aimed at residential waste diversion in 2004 when they took over operation of Vancouver.Reuses.com (which was originally set up by iWasteNot Systems as a demonstration site).

Having seen the Vancouver site, the City of Surrey approached Brock MacDonald, RCBC's Executive Director, to develop Surrey.Reuses.com. The city had a problem. During a two-week annual Spring clean-up event, people placed everything they wanted to get rid of out on their front lawns and neighbours drove around sifting through potential treasures. The event generated a huge mess and required millions of dollars to dispose of leftover items, not to mention all the exhaust from

continued...

Love Affair with Zero Waste ... continued

private vehicles. Surrey thought it could replace the entire program with a much less expensive online materials exchange.

Brock developed a service plan under which Surrey provides funding and markets the exchange website and RCBC contracts with iWasteNot Systems to provide the site and then adds a suite of value-added services to support the site. RCBC operates and administers the site on behalf of the city and provides customer service and support as well as community outreach and promotions through its integrated communications plan.

The Surrey exchange website has been a success on many levels. In addition to landfill diversion, the municipality managed to drastically reduce its annual budget. A percentage of the budget it used to spend on the Spring clean-up is now put towards marketing and promotion of the site.

The exchange concept has caught on. "It's going beyond just a level of advertising

within the community – it's now being thought of in terms of overall policy and strategy for the province to integrate the 3Rs into the solid waste management plan," says Brock.

Now the BC Materials Exchange network, through partnerships with additional jurisdictions, includes sites in the cities of Vancouver and Surrey, as well as the Okanagan, Thompson-Nicola and Columbia Shuswap regional districts, with more on the way. (See bc.reuses.com for a complete list)

The network also includes a province-wide Electronics exchange (BCEMEX.ca) and the original Industrial Materials exchange (BCIMEX.ca), now converted to an iWasteNot Systems platform. Once again, RCBC has partnered to provide these exchanges by successfully establishing multi-year support and sponsorship relationships with a for-profit recycling business and a product stewardship organization.



Benefits of an Online Materials Exchange:

- Core tool in overall waste diversion and reduction plan
- Sites are easy to administer with useful, customizable features
- Software allows administrators to avoid spam or fraudulent listings
- Community-specific success indicators; statistics and waste diversion metrics





Shifting paradigms through public outreach and education

The value of an exchange is not just the diversion it directly achieves, but the change in thinking it encourages among end-users as well as the reduction of 'up-stream' consumption through reuse.

Brock makes his case in this way, "It's a matter of explaining that when you use the exchange, not only are you diverting something from landfill but you're also slowing down the consumer problem.

stop global
climate change

Somebody doesn't have to now cut down a couple of trees to build a desk for a student at UBC because he just got this free desk from someone in the community who no longer needs it. It didn't go to landfill and it didn't have to travel very far. It actually helps to decrease the generation of greenhouse gas and stop global climate change."

Every time a new exchange is launched, RCBC works together with the regional districts to promote their site locally. And as Surrey has witnessed, once the traffic to the website hits a critical mass and more items are exchanged through the site, that brings people back and it just starts to feed on itself.

The exchange software provides various reports to help decision makers see and measure the success they are achieving. Metrics include website traffic, user surveys of the success of promotional efforts, as well as tonnage diverted, GHG emissions avoided, cost savings and others.

Selling a concept: Waste has value

An online materials exchange provides incentive for business and government not only in the form of cost-savings as Surrey has witnessed but in revenue generation as well. RCBC aims to get the message across that what is being disposed of is not just a piece of waste but actually a resource that's valuable to somebody.

Brock explains, "People need to start thinking in those terms rather than just throwing items away. Here's this valuable piece of equipment or material, someone's going to need it, let's exchange it."

Harvinder adds, "If you're going to be paying for someone to come and take something away, I bet there's someone out there who'll come and pick it up and it's not going to cost you anything."

Surprise Success!

"I was a little skeptical about what could be done with ten thousand strips of vinyl mesh, but through this exercise, I discovered there are actually 'going market rates' for used plastics, metals etc. Moreover, there were people who were willing to pay us for our waste! What a revelation! Digging deeper, we found a whole bunch of stuff lying around that people would be willing to pay for: old warranty pieces, obsolete machinery – we may even have someone interested in buying the scraps of climbing skin that get trimmed during the production process!

Through the wonders of the BCIMEX, we've learned first hand that one person's garbage really is another person's gold!"

Michael McClure of G3
www.genuineguidegear.com

A Little Diversion

Studies show that 25 per cent of municipal waste can be diverted away from landfills through changes in consumer behaviour.
(Source: Waste Not, March 2004)

Many regions have incorporated an iWasteNot online materials exchange as part of their overall 3Rs waste management strategy. Check out Washington State's www.2good2toss.com and Canada's www.reuses.com.

11,030 Tonnes of waste have been diverted from landfill since 2003 through exchanges provided by iWasteNot Systems.
(Source: www.iwastenotsystems.com)

Love Affair with Zero Waste ... continued

The importance of relationships

RCBC functions as a hub connecting various organizations together with similar goals or mandates in local communities, and on a province-wide basis. The materials exchange network provides another opportunity for RCBC to bring these partners together in pursuit of zero waste goals.

**generate
support and
spread the word**

When asked about advice for similar organizations that may want to start a regional network of exchanges in their province or state, Brock emphasizes the importance of relationships.

“We were very fortunate that we had a number of people from regional districts involved with

RCBC. Chances are good that someone who sits on your board will see the value in what you are trying to do and through interaction on your board and at their community level can work on your behalf to advocate the concept and seek funding approval.”

He also talks about the need to reach out to other potential stakeholders to generate support and spread the word. Being an industry steward, RCBC takes full advantage of its access to a broad spectrum of people who would have the interest and influence to set up and promote these exchange sites in partnerships with other organizations.

To learn more about RCBC’s efforts in product stewardship and achieving zero waste, visit the website at www.rcbc.bc.ca.

The BC Materials exchange network can be found at www.bc.reuses.com.

And for more information on setting up an exchange, visit us at www.iwastenotsystems.com.



Since the inception of iWasteNot Systems, our software has evolved as a tool to connect many people and organizations addressing many environmental and economic issues.

Whether your focus is on reducing waste in landfill, avoiding greenhouse gases, generating alternative energy, saving costs on the purchase of new materials, helping those in need, reducing food miles, jump-starting a local food economy, the benefits of an online exchange are many.

We offer exchanges like:

- www.surrey.reuses.com for residential/household materials
- www.materialtrader.org for industrial/commercial surplus
- www.bcemex.ca for electronics
- www.manuretrader.org for biomass
- www.agtrader.org
www.foodtrader.org for the farming sector
- www.nyfoodtrader.org for food diversion & rescue

We also provide the Recyclopedia, a customizable Reuse & Recycling Guide which can stand alone or be provided as part of any exchange website. See www.recyclopedia.org.

Get in touch with us to brainstorm an online exchange infrastructure that matches your waste management goals.

