



2014
MEMBERSHIP
REPORT



I'm delighted to be sharing the PAC NEXT 2014 membership report with you. As you know, I've been your Executive Director for just over 2 years now and I'm pleased to be a part of the steady progress that we're making on our journey towards A World without Packaging Waste. Our membership has remained steady at 125 and we appreciate all of your support recognizing that budgets are still very tight and resources constrained. Further, the recent announcement that Stewardship Ontario will pay municipalities \$115 million to cover reasonable Blue Box program costs highlights the role we have to play in helping to mitigate these costs. That's why it's important that we continue to provide meaningful value and opportunities for our members to participate as we strive to offer better solutions that will deliver cost efficient recovery of all packaging materials.

Projects - we focused on fewer projects to deliver more impactful results faster. The Top 10 packaging challenges in a MRF and the Films recovery teams both delivered webinars and final project reports.

Webinars - PAC NEXT sponsored 9 free to member webinars that featured 31 speakers, almost 700 attendees and covered a broad range of topics from bioplastics to marine litter to recovery of recyclable packaging materials as well as our project updates.

Reports - tremendous effort here with our extensive Global EPR Summary and Quarterly Canadian EPR reports, Marine Debris solutions, Ecommerce packaging optimization

Communication - published our re-vamped monthly newsletters with member guest columns and released our first PACNEXT video highlighting the PAC NEXT Way.

Workshops - launched the Ultimate Packaging Optimization course in Toronto and will be taking this to Anaheim early 2015.

Tools - re-launched the PAC NEXT decision trees as an interactive on-line tool that helps people determine whether packaging components are likely to be recycled

Ask Us - we continue to leverage our internal expertise as well as our ability to connect members to relevant know-how regarding packaging optimization and sustainability challenges.

PACit Knowledge Center - launched the interactive PAC knowledge center with a searchable database of all of the PAC NEXT assets.

PAC Food Waste - explored the intersect between innovative package design and the challenge of reducing food waste (see our PAC Food Waste report).

All of these results could not have been achieved without the support and input from our Leadership Council. The LC plays a crucial role in representing our members' best interests regarding the overall program activities, projects, results and value consistent with our vision. They are also along with our entire membership ambassadors for PAC NEXT to foster membership growth consistent with our mission of bringing companies together across the packaging value chain to collaboratively explore innovative packaging end-of-life solutions.

I'm looking forward to 2015 as we refresh our project program and continue to be engaged in this exciting journey towards zero waste.

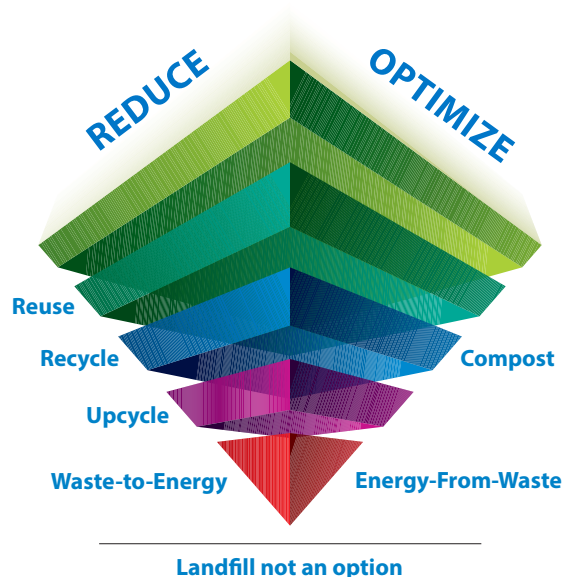
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The Goal – To minimize recovery system costs, while maximizing recycling rates and the value of recovered materials. The long term goal is to offset the cost of recovery with the value of the materials recovered.

The Materials – All materials must be recovered.

Landfill Bans – Landfill bans for ALL recyclable materials.

Recovery Solutions – Reduce, Optimize, Reuse, Recycle, Compost, Upcycle, Recover and Energy-from-Waste are all acceptable recovery solutions and should be part of an integrated waste management system. PAC NEXT recognizes that energy-from-waste (EfW) is not recognized as waste diversion in some regions at this time due to legal restrictions or local regulations.



New Packaging – Encourages adoption of the PAC NEXT Designing for Packaging Optimization for all new packaging or the enhancement of existing packaging.

New Materials Introduction Process – Encourages auditing of all new materials related to the recovery process using the PAC NEXT Decision Trees prior to commercialization.

Harmonized Recovery – National policy regulations for the recovery of packaging materials must be harmonized federally, by state or province and at the municipal level.

Harmonized Reporting – Adoption of a national reporting system (e.g., approach currently being developed by the Canadian Stewardships Services Alliance) to reduce administration costs and to improve the accuracy and timeliness (monthly) of reporting.

Standard of Service – Minimum and standardized level of service for all municipalities to improve participation and maximize potential recovery through convenience.

Consumer Communications – Consistent harmonized communications from municipality to municipality. The plan needs to engage, educate and inform consumers on the recovery of packaging material.



In 2014, Speed, Action, Results and Tools became our mantra. We focused on delivering webinars, reports and targeted projects in a timely manner that provided value to our members while also highlighting our achievements to date. We could not have accomplished this without ongoing engagement and support from our members, our interns and the PAC team. The packaging sustainability landscape is shifting – companies have moved from the initial development of their sustainability goals to the execution phase of these plans. Implementation and goal realization is no simple process. Here at PAC NEXT, we are a resource for you and we hope that you will journey with us for A World Without Packaging Waste. We will continuously work to accommodate the needs of our members, provide value and make an impact where an impact can be made. Moving forward, PAC NEXT aims to make tools more useful, improve communication and education programs, and find better ways to connect and collaborate with our members.

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 PAC NEXT, Program Manager
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COMMUNICATION:

The PAC NEXT Way Video

PAC NEXT developed The PAC NEXT Way video to share our core principles for “A World Without Packaging Waste” as described on page 3.

Monthly Newsletters

PAC NEXT continued to communicate news, events and helpful weblinks through circulation of 11 monthly newsletters in 2014. Added “Ask Us!” feature to encourage members to access our internal expertise

9 guest columns:

- **Paulina Leung, Emterra** – Emterra Environmental and Green By Nature EPR
- **Dave Gordon & Courtney Daniels, York Region** - York Region’s Integrated Waste Management Master Plan
- **John Baldry, City of Toronto** - What’s challenging diversion in Toronto?
- **Andrew Joseph, Canadian Packaging** – PAC’s quest for the optimal packaging solution
- **Paul Yang & Lib Trombetta, Mother Parkers** – Single Serve capsules: Addressing Beverage Quality and Waste
- **Mark McKenney, MGM Management** – Producer Responsibility is Here to Stay
- **David Haslam, SGS** – The Print Working Group
- **John Mullinder, PPEC** – Celebrating achievements as PPEC nears 25 years in 2015
- **Erica Ocampo, Dow Chemical** - How Packaging and Consumer Behaviour Come Together to Alleviate the Global Food Crisis



The screenshot shows a newsletter layout with the following sections:

- Collaboration and Innovation at A Day in the Life Symposium!** (with images of the event)
- ASK US!** - We are a resource to you! Click on ASK US! to send your questions.
- HEADLINE NEWS**
 - Upcoming Meetings
 - Top 10 Packaging Challenges in a MRF (Tues. Oct. 28th, 11am ET)
 - PAC NEXT & PAC FOOD WASTE Leadership Council (Tues. Dec. 2nd, 9am ET)
 - EPR Updates
 - Canadian EPR Updates - Fall issue
 - 2013 EPR Canada Report Card
 - Recycling news:
 - Closed Loop Fund to move fast on initial projects
 - Curbside Value Partnership names first three cities
 - APR releases Shrink Label Working Group Report
- A Day in the Life of a Package** - Article by Alan Blake, PAC NEXT, Executive Director. The article discusses feedback from a symposium and highlights the need for better solutions to increase recovery of packaging materials.

Published Reports

PAC NEXT provided members with RESULTS through several reports released throughout 2014.

Summaries of Eleven Global EPR Programs

- Provides general overview of packaging EPR programs in seven countries and four Canadian provinces so that governments, brand owners, and other stakeholders might learn from them and use them to help improve the recovery, recycling, and value of packaging materials
- 88-page document
- Press release on March 25, 2014
- Article in Packaging Digest on April 14, 2014

Marine Litter and the Role of the Packaging Industry

- Informs stakeholders in the packaging value chain about the issues and challenges related to marine debris and its relationship with packaging and litter
- Released March 2014
- Supports Operation Clean Sweep®
- Supplementary information to Marine Debris Solutions webinar hosted in February

Canadian EPR Quarterly Updates

- Fulfills purpose to inform stakeholders about the status of Printed Paper & Packaging EPR in Canada
- First issue released in Spring
- Since converted to an online format for a total of four issues in 2014

Ecommerce Packaging Optimization Guidelines

- Response to requests from membership who are experiencing growth of Ecommerce in their business
- Offers a set of guidelines based upon discussions with member companies and current available resources
- Published July 2014

Top 10 Packaging Challenges for Recycling in a MRF

- Developed to inform stakeholders, especially packaging producers, about end-of-life challenges for the recycling of packaging materials at a material recovery facility (MRF)
- Published December 2014



Webinars

PAC NEXT Webinar Series 2014

Our goal has been to foster information sharing on topics of common interest and to facilitate collaboration across stakeholders to find solutions. As such, PAC NEXT sponsored 9 free to member webinars that featured 31 speakers, close to 700 attendees and covered a broad range of topics from food security to bioplastics to marine litter to recovery of recyclable packaging materials as well as our project updates (see table below).

Webinar Title	Speaker Companies	Date
Importance of global food safety standards through the supply chain	PAC, Global Food Safety Initiative (GFSI), ConAgra Foods, Silgan Plastics	Jan. 29th
Use of Digital Tools to enable a world without packaging waste	Axiom Consulting	Feb. 20th
Finding solutions for Marine Litter	Canadian Plastics Industry Association (CPIA), Ocean Conservancy, Natural Resources Defense Council (NRDC), Method	Feb. 26th
Challenges of increasing recovery of Food Service Packaging	Foodservice Packaging Institute, Resource Recycling Systems, Tim Hortons	Mar. 12th
Market development of bioplastics—rigid and flexible packaging solutions and end of life options	European Bioplastics, Natureworks	Mar. 26th
The challenges of introducing innovative packaging materials into the curbside collection programs	MicroGREEN, Solegear, Dow Chemical, Region of Peel	Apr. 9th
Opportunities and challenges for recovery and recycling of packaging materials - plastics, paperboard, metals and glass	Dow Chemical, Paper and Paperboard Packaging Environmental Council (PPEC), Can Manufacturers Institute, Owens-Illinois (O-I)	Sept. 10th
Optimizing labels on PET packaging	Blue Mountain Plastics, The Association of Postconsumer Plastic Recyclers (APR), Eastman Chemical, Avery Dennison	Oct. 22nd
Top 10 packaging challenges for recycling in a MRF	Green By Nature EPR/Cascades Recovery, Procter & Gamble (P&G), City of Hamilton, Region of Peel, City of Seattle/Northwest Product Stewardship Council	Nov. 24th

Plans for the 2015 Webinar Series are currently underway with proposed topics as follows:

- Canadian EPR updates and harmonization efforts
- Recycling news across North America
- Packaging solutions for food waste reduction
- Compostables and biopolymers
- Member focus on sustainable packaging success stories
- PAC NEXT project updates



Workshop

- Hosted the first course on Earth Day, April 22, 2014
- Features four course sessions
- 9.2 overall rating from workshop participants
- Column feature in *Canadian Packaging*
- Developing a condensed online version for 2015
- Next course offering will be at WestPack, Anaheim, CA Feb 2015



“Got me excited to really dive into our company’s plan and develop a strong strategy.”

- Joanna Caners, Home Depot

THE ULTIMATE PACKAGING OPTIMIZATION COURSE

Conferences

In 2014, PAC NEXT sought external outreach through conference attendance and presentation opportunities at:

- Sustainability in Packaging, FL
- Best of Food & Beverage, MN
- AMERIPEN Annual Meeting, VA
- NAPRA meeting, LA
- AIPIA World Congress - Chicago, IL
- PACK EXPO - Chicago, IL



PAC NEXT 2.0 Projects

Projects are proposed by members, then voted and prioritized annually by the PAC NEXT Leadership Council. Project teams meet monthly with specific objectives and deliverables to reach targeted goals.

Multi-Layer Laminates & Films Recycling

Co-chairs: Guy McGuffin, *Guy McGuffin Consulting & David Yousif, City of Hamilton*

Objectives:

- To bring together industry experts to evaluate and develop strategies to recover and recycle flexible mono and laminated films
- To explore opportunities to run pilot programs (with partners) for both mono films and multi layer laminates



Project highlights:

The project team with 33 members held 7 meetings through 2014 including one Material Recycling Facility tour at the City of Hamilton. The team leveraged earlier work sponsored by CPIA / CIF / SO and supported by PAC NEXT "Analysis of flexible film plastics packaging diversion systems" which highlighted the reality that regular mono films that have good end markets needed to be kept separate from multi-layer laminate films that do not have viable end markets today. And, as such, the emphasis has been on creating a forum for expert information sharing including guest presenters as follows:

- Enval presentation on Aluminum recovery from laminated packaging
- TeTechS presentation on Terahertz sensor technology to characterize different plastic laminates for efficient sorting
- Reclay StewardEdge sharing a MRF sampling case study for composite paper packaging
- Flexible Packaging Association talking about their Packaging Resource recovery program
- York & Durham region providing background to their energy recovery center
- Dow Chemical presenting the Citrus Heights energy bag pilot program



Project deliverables:

An executive summary has been published in the PACit! Knowledge Center summarizing the teams work through 2014. Headlines for work delivered and on-going are as follows:

- An array of plastic laminates samples were provided to TeTechS to test "proof of principle" at bench scale for the TeraHertz sensor technology and connections have been made within the value chain to explore scalability.
- Zzyzx Polymers have agreed to test a small batch of post consumer laminates in their facility in Allentown, PA. Stewardship Ontario is in the process of providing the material.
- Connected with Merlin Plastics in BC as they are providing material as an alternative fuel source for the cement industry
- Continuing to connect with re-processors across NA to explore alternative material uses

Plans for 2015:

Continue to share information, latest technology developments and explore viable alternatives for multi-layer laminates other than the current options of landfill or energy recovery. Continue to explore the possibility to support a pilot program and run a webinar to share project results.

Top 10 Packaging Challenges in a Material Recovery Facility (MRF)

Co-chairs: Dan Lantz, *Green By Nature* & Keith Fanta, *Procter & Gamble*

Project objectives:

- Understand how MRF's operate and understand the flow of packaging materials through a MRF (with or without optical sorters)
- Inform stakeholders about why a package may or may not be recyclable and whether simple design changes can help increase recovery and recycling in a MRF
- Identify opportunities for improved communication and education across the value chain (including consumers) on how to make packaging materials recyclable.



Project Highlights:

The focus of this project team has been to share information and initiate a discussion between stakeholders in the packaging value chain so that they can make informed decisions regarding packaging designs and understand what happens to those packages in a Material Recovery Facility (MRF). 9 project team meetings were held through 2014 with expert input and discussion from 36 team members. A matrix of 25 different packaging types was developed and all were evaluated for what physically happens during collection, sortation (manual, mechanical and optical) and re-processing. Members then voted on the "Top 10 Packaging Challenges in a MRF" and followed up with an extensive review of the following materials:

1. Multi-layer laminates
2. Compostable plastics
3. Black plastic containers
4. Full shrink wrap labelled bottles
5. Hot beverage polycoated cups
6. Metallized tubes
7. Single serve hot beverage pods
8. Colored opaque PET bottles
9. Non-PET clamshells
10. Cardboard tray with plastic film



Project deliverables:

The project has been completed successfully. An executive summary has been published and posted on the PACit! Knowledge Center that provides an overview for all ten material types answering 3 questions (1) What happens to this material today? (2) What is being done about it? (3) What is the future outlook? The project results were also shared via a PACNEXT webinar held on November 12th 2014. The team recognizes that every MRF is different and that the challenges a MRF experiences may vary as a result. Also, the information presented will need to be reviewed on an annual basis to reflect new investment in MRF infrastructure and technology as well as the introduction of new and different materials into the curbside collection system.

Plans for 2015:

Plans include working on those packages where we have identified gaps. In other words, what packages are currently causing a problem that do NOT have one or more groups working on a solution. For example, take a closer look at single serve pods, PS packaging and others.

WORKING GROUPS

Working Groups are formed by members with similar interests and challenges. They meet bi-monthly or quarterly to define common problems and challenges.

Optimizing Labels on PET Packaging

Chair: Guy McGuffin, *Guy McGuffin Consulting*

Background & Objectives:

The PACNEXT working group on Full Wrap Label & PET Thermoform Labels & Adhesives has been diligently meeting through 2014. The project goal has been to define common problems with current pressure sensitive and shrink sleeved PET packages and to provide voluntary guidelines that can lead to affordable technical solutions that will ensure PET packages can be readily recycled. The desired output of the work was to offer a webinar with expert speakers to share guidelines and recommendations and to publish an executive summary.



Project Deliverables:

The project has been successfully completed and an Executive Summary report posted to the PACit! knowledge center. The PACNEXT webinar Optimizing Labels on PET Packaging was delivered on Wednesday, October 22nd 2014. Sixty people signed-up for the webinar and 44 attended. The following voluntary guidelines were shared in the hope that they will help brand owners, designers and package developers in choosing label, ink and adhesive combinations that are fully compatible with PET packaging and delivering high quality recycled PET materials:

There are commercially available **pressure sensitive film labels** that have a negligible impact on the PET recycling process. Brand owners, designers and package developers are encouraged to use this type of label and have suppliers provide test data to support claims in recycling performance.

- Plastic Pressure Sensitive labels (with ink) should float in water, the ink should not stain rPET and adhesives should wash off cleanly from the PET
- Paper Pressure Sensitive labels - a minimum step would be to specify a label adhesive and paper stock where lab testing shows that the label adhesive washes off cleanly from the PET package

If using **shrink sleeve labels** there are several commercial labels that meet APR critical guidance. Brand owners, designers and package developers are encouraged to evaluate these labels and continue to support innovating additional sleeve label technology.

- Shrink sleeve label requirements would include label floats in water, ink does not stain rPET, where possible use a partial $\frac{3}{4}$ sleeve instead of a full sleeve to facilitate optical sorting

Plans for 2015:

Continue to educate, facilitate discussion, and to stay connected with APR, NACOR, the Full-Wrap Label Consortium and other associations such as NAPRA and industry leaders in working to remove barriers and increase use and adoption of recycle friendly labels and adhesives.

The Print Working Group

Chair: David Haslam, *SGS*

Background & Objectives

This group was formed by members of PAC NEXT that wanted to generate a stable working group that our industry segment could collaborate together to implement solutions aligned with core goals and objectives of PAC NEXT. The challenge these team members faced was finding some relevant challenges from our industry niche that we could mutually apply across the multi-functional team. With team members as diverse and as similar in some cases finding non-proprietary solutions that we could share and achieve set the task quite high.

Companies such as SGS and Schawk for graphics, Color Ad, Jones Packaging and Bemis as converters joined by Xerox and Heidelberg offered a very eclectic group. The team chose to meet on September 30th prior to the PAC Symposium and was hosted at the SGS office. The team had shared on previous calls some internal green strategies as well setting out a clear agenda.

Through best practices we agreed to discuss in a collaborative forum about developing a sustainable print operation from plant floor to office and what that would involve all parts of the value chain.

- Waste diversion techniques and strategies
- Separation at source
- The paperless office

Through determining the optimization of an environmental footprint of the print supply chain and committing to measurable goals that could reflect and not constrain growth and output on:

- o Carbon footprint
- o Hazardous waste
- o Waste diversion targets
- o Water consumption

Through running an inventory of all the various certifications that each member holds from ISO 14000 to FSC to Bullfrog power and determine if we can find some mutual standards that we could measured against.

Plans for 2015:

The group will continue working through the agenda, openly invite like minded members to join and will report back on a regular basis.



Features and Benefits of PAC NEXT

PACit! Knowledge Center

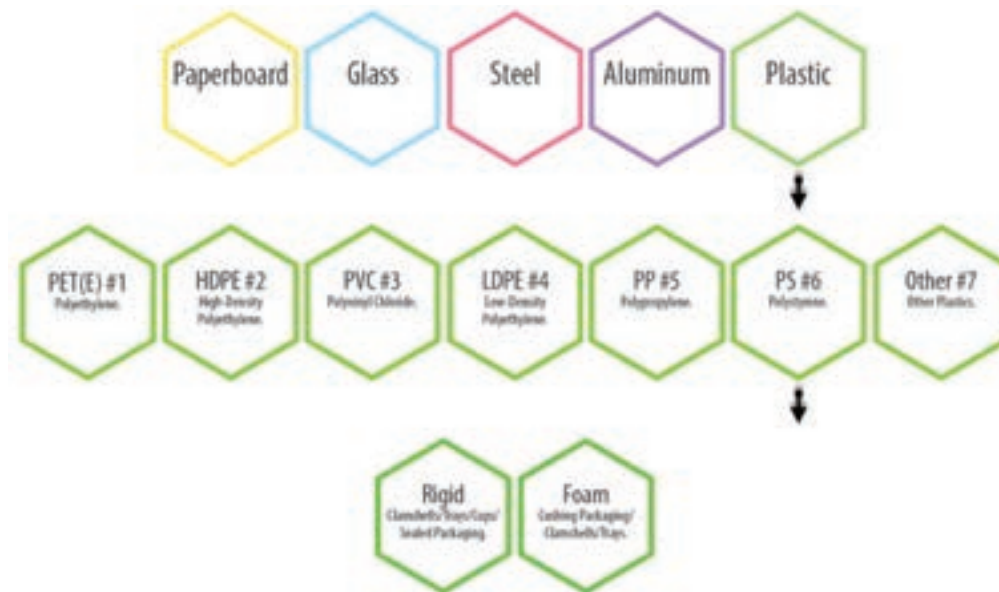
PAC launched the new interactive website in September 2014 that features the PACit! Knowledge Center. This online tool provides members with the following:

- A centralized knowledge repository for anything related to packaging, easily searchable and allows you to refine your search results
- Ability to post your own papers



Interactive Decision Trees

The new website also features interactive version of the PAC NEXT Decision Tree Packaging Evaluation Tool. This tool was developed by the former sustainable innovation committee to help packaging designers and manufacturers identify and avoid any unintended consequences of introducing new packaging materials or existing packaging materials with a new application, within the current recycling infrastructure.



2015 Outlook

PAC NEXT must stay true to its vision of A World Without Packaging Waste while actively meeting the needs of a growing (and busy) membership trying to navigate the complexities of packaging legislation, waste management, consumer engagement and package design on a local, regional and global scale.

Continued programs

1. 6 webinars – 3 Spring and 3 Fall
2. Monthly newsletters
3. Quarterly EPR reports
4. Project executive summaries & special reports
5. Grow online resource database on PACit!
6. ASK US – consult with member companies

Governance

The PAC NEXT Leadership Council meets four times a year to oversee the PAC NEXT program and serve two key roles:

1. To represent PAC NEXT members' best interests regarding overall program activities, projects, results and value consistent with the vision of A World Without Packaging Waste
2. To act as ambassadors for PAC NEXT to foster membership growth consistent with our mission of uniting leading organizations across the packaging value chain to collaboratively explore, evaluate and mobilize innovative packaging end-of-life solutions



2014 Leadership Council Members

Chair: Nestle Canada Inc.
 Bemis Co Inc
 Cascades Recovery
 Coca Cola Ltd.
 Costco Wholesale Canada
 Dow Chemical
 Guy McGuffin Consulting
 Ice River Springs Water
 Kraft
 Loblaw Brands Ltd.
 McDonald's Corporation
 Norampac - Division of Cascades
 Owens-Illinois, Inc.
 Procter & Gamble Inc.
 Region of Peel
 Schawk
 Sobeys
 Terracycle Canada
 Walmart

Angela Dennis
 Dave Carruthers
 Albino Metauro
 Jennifer Hottinger-Sloan
 Luc Lortie
 Erica Ocampo
 Guy McGuffin
 Ryan L'Abbé
 Gavinder Bhatia
 Ena Popic
 Jeff Fitzpatrick-Stilwell
 Louis Lemaire
 Ryan Modlin
 Keith Fanta
 Norman Lee
 Bob Cockerill
 Frances Gamache
 Tom Szaky
 Karen Blumel

Projects for 2015

Here are the key headlines from the PAC NEXT Leadership Council meeting in December 2014 that discussed potential elements of the 2015 PAC NEXT program. We will be working with the Leadership Council to set priorities and to ensure that we consistently deliver useful outcomes for all of our members.

PAC NEXT Innovation Gateway

- Create a forum for members to review new and innovative packaging designs with experts from across the packaging value chain – the goal is to determine the necessary conditions for a package to be cost effectively collected, sorted and re-processed for next life applications
- Leverage expert panel to review all new packages coming onto the market (and use knowledge to update the Decision Tree tool)
- Re-consider our approach – design a package for the existing infrastructure vs. adapt infrastructure to accept new and innovative packaging?
- Be a resource to share knowledge and bust myths on compostable, bio-degradable, biopolymers

Cost Reduction Working Group

We aim to explore the following areas to help our members mitigate the costs of EPR:

- Understand EPR fee structure across Canadian stewardship organizations and stay on top of potential EPR developments in USA
- Collect data on municipal solid waste stream composition and understand the impact on cost when comparing weight per ton vs. per unit
- Review recycling program spreadsheet of acceptable materials across Canada's 50 largest municipalities
- Continue work on multi-layer laminates regarding pilot programs to create valuable alternatives to landfill

Energy-from-Waste and Engineered Fuel:

- Interest to produce a white paper on the status of energy-from-waste in North America (legislation regarding diversion, current facilities and planned projects) and explain difference between incineration and engineered fuel

Frequently Asked Questions (FAQ's):

- Explore interest in setting up a retailer working group to compare and review their FAQ's regarding supplier packaging challenges
- Set-up feature in monthly newsletters and/or website and provide answers to FAQ's

We welcome your feedback and thoughts on the 2015 program proposals and priorities.

PAC NEXT Members

Congratulations on a successful 2014

Thank you for your ongoing support





PACNEXT
A WORLD WITHOUT PACKAGING WASTE

Founded August 3, 2011

