FPPA & Vanguard: Sustainability…

with a twist of Walmart

"What we are trying to do is live every day as an example of how lots of small things start to add up."

~ Mark Mathes, CEO & Owner, Vanguard Companies

Mark Mathes
CEO Sustainability Resume

- *Member and Chairman*, AICC (Association of Independent Corrugated Converters) Sustainability Committee
- *Member*, FBA (Fibre Box Association) Sustainability Committee
- *Member*, Wal-Mart Sustainable Value Network
- *Member*, Wal-Mart PSST Team (formerly CPG Committee) to advise on issues relating to the Wal Mart Scorecard
- *National speaker on the subject of sustainability in the corrugated industry*
- *Member*, Board of Directors, AICC
- *Member*, Board of Directors, FBA
- *Member*, Board of Directors, Corrugated Packaging Alliance
- *Faculty Member*, In-Store Marketing Institute
- *Member*, Editorial Advisory Board for Paperboard Packaging Magazine

"What we are trying to do is live every day as an example of how lots of small things start to add up."

~ **Mark Mathes,** *CEO & Owner, Vanguard Companies*

VANGUARD COMPANIES

- *Founded by Jack Mathes in 1979*
- *Privately held - 100% owned by Mark Mathes*
- *Kansas City's largest producer of corrugated merchandisers*
- *North American leader in sustainability and quality certification.*
- *Key customers: Hallmark, Walmart, Sprint, Coca Cola, Hills Pet Nutrition, Spectrum Brands*
- *400,000 sf underground manufacturing facility*
- *Offices in St. Louis and Bentonville*
- *Includes Vanguard Label and Advanced Logistics and Fulfillment*
- *$42 mm in sales in 2010*

VANGUARD COMPANIES

2010 Sustainability Awards

North America's Most Sustainable Corrugated Converting Facility
- Hallmark Certified Quality Supplier
- Greener Package 2010 "Innovator of the Year"
- Greener Package 2010 "Beyond the Package" Winner
- 2010 Capstone Award for Green Design
- 2010 EDC Cornerstone Small Business Finalist
- 2010 KCIC "Brick by Brick" Award Winner for Sustainability

"Greener Package Awards judges used words such as *"incredible," "visionary"* and *"outstanding"* to describe Vanguard's sustainability achievements..."
~ *Packaging World,* Sept. 2010.

EDC CORNERSTONE AWARDS

Greener Package™
2010 Award Winner

CAPSTONE AWARDS
KANSAS CITY BUSINESS JOURNAL

VANGUARD COMPANIES

Why did Vanguard get into the game?

- *Walmart needed some good press so they took a safe approach*

- *Somebody internally realized this could be big money*

- *Quickly kicked it into the next gear*

- *A Walmart vendor asked us to help them get into the game*

- *We were unprepared and the customer told us so*

VANGUARD
COMPANIES

We had to quickly create a game plan.

- *What did Walmart want (because everybody else would eventually get it)?*

- *Where did we stand at that moment?*

- *What did we need to do to improve?*

- *What is sustainability anyway?*

We knew whatever it was, it had to be done in a way as to make it economically viable!

VANGUARD
COMPANIES

We had to understand how Walmart wanted the game played. So to start, what is their definition of Sustainability?

- *Lee Scott- "..actions taken … 21st century speech*
- *Then defined as the elimination of waste*
- *Then defined waste*
- *LS- "…anything not absolutely essential to the sale of the product is waste…"*
- *In today's world, is flexo printing on a master shipper waste?*

VANGUARD
COMPANIES

Eventually they settled on the academic definition, so we did too:

- *Environmental, Economic and Social*

  It's like a three legged stool, all of the legs are required for the stool to stand!

- *This definition when properly applied can minimize green washing and cement your reputation as being in the game! It can also expose who is not in the game.*

VANGUARD
COMPANIES

Vanguard needed a way to show we were in the game. We chose to use International Standards that are third party audited:

- *Environmental: ISO 14000*
- *Economic: ISO 9000*
- *Social: ISO 18000*
- *Added Chain of Custody:*
  - *SFI and FSC*
- *Added Silliker non-contact food certification with recall provisions*
- *Added HACCP training and certification*

VANGUARD COMPANIES

We had an action plan in a broad sense, but what about Walmart?
What were they doing?

- *Decision was made to score what was being sold at Walmart not score Walmart itself.*

- *Walmart as a corporation could only impact 8% of their own Carbon Footprint where as what they sold made up the remaining 92%.*

- *The starting point would be the attainable, low hanging fruit; packaging first and the product later. How would they do it? The R's and the Scorecard*

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COMPANIES

The 7 "R's" of Sustainability

- *Walmart created the 7 R's as a way to put everybody's efforts on a common playing field*

- *They set the tone but require each primary and secondary vendor to develop their own definitions to each "R"*

- *Your "R's" of sustainability can only be formatted on an 8.5 x 11 sheet and are pretty much a mandatory handout in Bentonville.*

The 7 "R's" of Sustainability

1. Remove: Vanguard can not only design in paper content reductions, we can suggest linerboard combinations that reduce paper content. But more than that, our designers seek to remove all non-sustainable
materials from a project and replace them with sustainable materials. An example is our use of spiral wound paper tubes to replace metal rods in displays.

2. Reduce: New light weight liners and innovations such as singleface lamination can significantly reduce the paper content of a box or display; sometimes up to 16% for similar applications.

3. Reuse: In many situations, corrugated can be designed for multiple use applications such as returnable cartons.

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The 7 "R's" of Sustainability

4. Renew: *100% of corrugated linerboard and the corn starch adhesive used to bond it is made from renewable resources.*

5. Recycle: *At Vanguard, our typical package or display runs 60-100% post consumer recycled content. Also, everything we make is 100% recyclable.*

6. Revenue: *Vanguard has adopted environmental, financial and human resource sustainability goals to further enhance our revenue stream.*

7. Read: *Or better yet, call Vanguard (800-475-0193) and ask about our sustainability efforts and how they can be applied to your application.*

VANGUARD COMPANIES

![Vanguard Companies logo] **VANGUARD COMPANIES** display and packaging solutions

7 R's
of Sustainability

REMOVE: Vanguard can not only design in paper content reductions, we can suggest linerboard combinations that reduce paper content. But more than that, our designers seek to incorporate sustainability initiatives throughout the life cycle of a project up to the end-of-life of an item. By doing this, we create the "nutrient" for the next item. An example is our use of spiral wound paper tubes to replace metal rods in displays.

REDUCE: New light weight liners and innovations such as singleface lamination can significantly reduce the paper content of a box or display; sometimes up to 16% for similar applications.

REUSE: In many situations, corrugated can be designed for multiple use applications such as returnable cartons.

RENEW: 100% of corrugated linerboard and the corn starch adhesive used to bond it is made from renewable resources.

RECYCLE: At Vanguard, our typical package or display usually runs 45-100% recycled content. We strive to make as many of our products as possible to be recyclable to become the cradle of a new life cycle.

REVENUE: Vanguard has adopted environmental, financial and human resource sustainability goals to further enhance our revenue stream.

READ: Or better yet, call Vanguard (800-475-0193) and ask about our sustainability efforts and how they can be applied to your application.

ENVIRONMENTAL SUSTAINABILITY COMMITMENT

The Vanguard Companies are committed to creating a culture of environmental, employee and corporate financial sustainability in all that we do. We believe that we have an obligation to attach the future of our company to our ability to manage all of the resources we consume, cause to be consumed or create for the next generation of products at the end of our products' usable life. We will achieve this through the following actions and guidelines.

- We will consider the impact of each step in the value chain of every product we create or manufacture.
- We will do business with others who do the same.
- We will sell products to customers who respect this and see the value that this creates.
- We will hire employees who believe this and apply it daily.
- We will set yearly goals to challenge ourselves and grade our progress.
- We will share our knowledge with others so that they may do the same.

TIME SUSTAINABILITY

At Vanguard, we view time as a resource to be managed for maximum value. Like all resources we consume, sustainability initiatives can improve our consumption of this valuable commodity. We therefore commit to the following:

- We will treat our customers, vendors and employees time with respect.
- We will take efforts to reduce the time involved in every process and procedure within our company.
- We will create structural designs to reduce the amount of time to assemble, fill or kit all projects.
- We will employ technology wherever possible to reduce the time required for each step in the manufacturing process.
- We will strive to increase capacity on our existing machines to reduce the amount of future equipment needed to grow.

ENVIRONMENTAL SUSTAINABILITY

- We commit to finding vendors who also have and follow environmental sustainability statements.
- We commit to using recycled raw materials and products when possible.
- We commit to designing and selling products that will be 100% recycled at the end of their useful life.
- We commit to reducing the amount of energy we consume throughout our daily operations.
- We commit to reducing the amount of energy consumed by our vendors in products that they make or sell to us.
- We commit to setting far reaching goals and grading our progress towards these goals.

PERSONNEL SUSTAINABILITY

- We commit to viewing our employees as our most important natural resource.
- We commit to policies and procedures which will renew and recycle their minds.
- We commit to an environment that encourages employees to share their thoughts and ideas on how to create sustainability
- We demand that management embrace change and to never accept "good enough".

What is the Walmart Scorecard?

- *A comparative analysis to view individual packages against the norm.*
- *Allow a blue print to establish the norm and then model for improvement changes.*
- *Establish a plan for buyer compensation to push improvements.*
- *Establish a plan to push the sustainability envelope with vendors.*
- *Establish a mechanism to track the progress of their stated goals.*

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Sustainable Packaging Scorecard

- As part of its ongoing sustainability efforts, Walmart intends to reduce overall packaging used in its supply chain by 5% by 2013.

- All direct Walmart suppliers are encouraged to enter packaging for all SKUs by February 2008.

- Will be part of Walmart's purchasing process starting February 2008.

ECRM

MarketGate

WAL-MART

Wal-Mart Stores, Inc.
Package Modeling

Sustainable Packaging Scorecard

- Once entered, the Sustainable Packaging Scorecard compares all packages in a product category to all other packages within the product category.
  - Packages receive percentile ranks and normalized scores.
  - Allows Wal-Mart to easily compare packaging sustainability across a product category.
  - Wal-Mart can use this data to make more informed purchasing decisions and buy more products with more sustainable packaging.
  - Direct suppliers can easily see how their packages compare with their competitions' packages.

Sustainable Packaging Scorecard Scoring

- Because scores are dependent on category comparisons, scores change over time as more packages are added to the data set.

- No set standards for good or bad scores, only that higher scores are better.

- Wal-Mart buyer bonuses will partly depend on purchasing products with sustainable packaging.

- Products with sustainable packaging will be preferred over products without sustainable packaging.

ECRM

MarketGate

WAL-MART
WAL-MART

Wal-Mart Stores, Inc.
Package Modeling

Sustainable Packaging Scorecard Metric Calculations

- Equations and Variable definitions for all metrics used in the Sustainable Packaging Scorecard are provided:
    - Greenhouse Gas Emissions, 15%
    - Sustainable Material, 15%
    - Average Distance to Transport Materials, 10%
    - Package to Product Ratio, 15%
    - Cube Utilization, 15%
    - Recycled Content, 10%
    - Recovery, 10%
    - Renewable Energy, 5%
    - Innovation Different from Energy Standard, 5%

ECRM

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WAL-MART
WAL-MART

Wal-Mart Stores, Inc.
Package Modeling

Important Notes:

- *The pre-loaded metrics were populated from Government data, NGO's, product and industry LCA's and industry associations only.*
  No individual corporate data was used.

- *Individual data comes out in the scores of the individual packages.*

- *The US was first followed by Canada. There is a multi-year roll out across the rest of the world.*

What about China?

- *Due to a lack of credible data from third party, independent sources, some countries including China were not initially being scored.*

- *Scoring without credible data can do more harm than no score at all.*

- *This is rapidly improving and many third world originated packages are now getting scored as part of a domestic retail item.*

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How is the scorecard loaded?

- *Through Retail Link*
  - *Retail Link provides information that allows a supplier to impact all aspects of their business*
  - *Through Retail Link, suppliers can plan, execute and analyze their business including sustainability issues*

- *Accessible only by the vendor to Walmart*

- *Each item has a score*

- *Each item can have multiple components*

- *Been some issues with auto loading*

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Walmart & Sustainability

Background & Product Info with Selling Unit Packaging Questions

Walmart & Sustainability

Transport Packaging Materials Section

4 materials were selected for this exercise. An example of the 4 materials would be a hardwood pallet, a pallet slip sheet, RSC master cases of product, and stretch wrap.

Sustainable Packaging Scorecard Demonstration

How to Calculate Selling Unit Cube Utilization (SUCU)

$$SUCU = \left\{ \frac{PV}{SL \times SW \times SH} \right\}$$

10"

5.5"   5.5"

- PV = Product Volume
- SL = Selling Length
- SW = Selling Width
- SH = Selling Height

How to Calculate Selling Unit Cube Utilization (SUCU)

10"
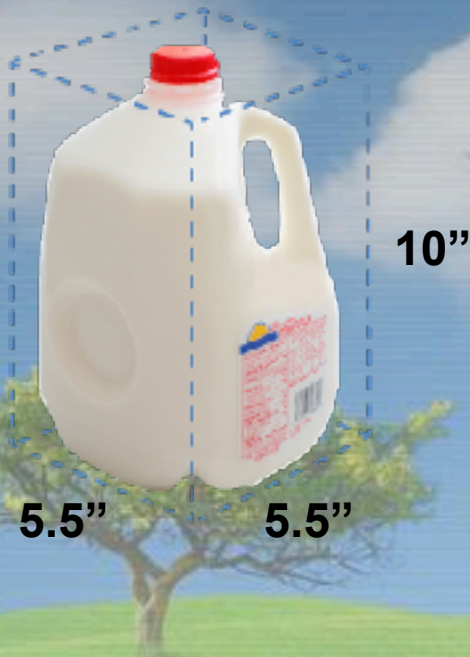
5.5" 5.5"

$$SUCU = \left\{ \frac{PV}{SL \times SW \times SH} \right\}$$

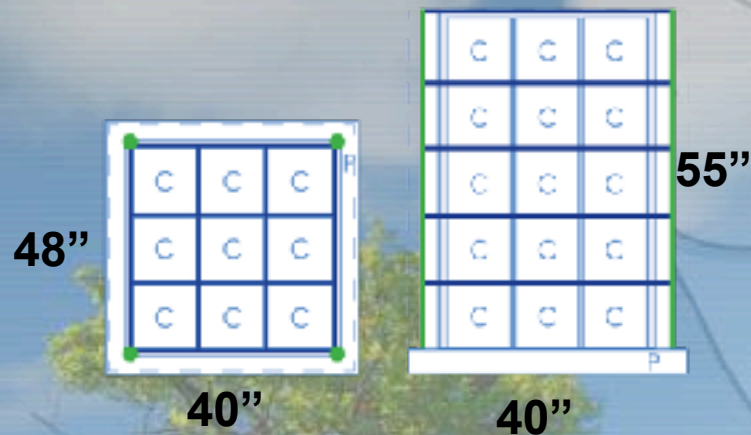$$SUCU = \left\{ \frac{231}{5.5 \times 5.5 \times 10} \right\}$$

$$SUCU = \left\{ \frac{231}{302.5} \right\}$$

SUCU = .763636 = .76

MarketGate

WAL-MART Wal-Mart Stores, Inc.
WAL-MART Package Modeling

How to Calculate Transport Cube Utilization (TCU)

$$TCU = \left\{ \frac{SUV\_ALL}{TL \times TW \times TH} \right\}$$

- SUV_ALL = Selling Unit Volume for all boxes around the selling units in transport unit
- TL = Transport Length
- TW = Transport Width
- TH = Transport Height

What the Walmart Buyer Sees:

BACK TO RL   MY FAVORITES ▾   RL SITE MAP ▾

🇺🇸 English ▾   My Settings ▾   Logoff

Welcome validator site
WM WEEK: 200748

Retail Link

⭐ Add to My Homepage   ❓ Get Support ▾

Create New Report | **Products & Scores**

Wal-Mart Stores Inc. Sustainability Reports

The Sustainability Reports page allows Wal-Mart buyers to quickly review supplier results on the Sustainable Packaging Scorecard and find possible improvements for individual packages. Use the tabs immediately above the Departments & Categories table to switch between reports for Wal-Mart Stores, Inc. and Sam's Club.

To see how many scorecards have been completed by Department, look in the Departments & Categories table below. Use the drill downs to review by Category and SubCategory.

To see scorecard results for individual items and suppliers and to find possible sustainability improvements, use the Create new Report tool to generate SubCategory reports. To create a report, enter a Report Name in the text field, select the SubCategories you want to look at, and click the Save Report button. Your saved reports can be accessed in the View/Edit Existing Reports table and the Products & Services tab.

Create New Report

Report Name:

[   ]

[Save Report]

VIEW / EDIT EXISTING REPORTS

- Wal-Mart Stores, Inc.
  - Grocery - Dry 📝❌
  - Dairy 📝❌
  - Frozen - Misc 📝❌
  - Turk & Chick 📝❌
- Sam's Club
  - Turk & Chick 📝❌

Wal-Mart Stores, Inc. | **Sam's Club**

Departments & Categories

Department / Category / Subcategory	Number of Products	Scorecarded Products	Percent Scorecarded
⊟ Dept. (93): MEAT - FRESH & FROZEN	6072	80	1.32 %

Category	Number of Products	Scorecarded Products	Percent Scorecarded
⊞ Cat. (904): Miscellaneous	5	0	0.00 %
⊞ Cat. (1099): HAWAII MERCHANDISE	54	0	0.00 %
⊞ Cat. (3402): FRESH GROUND BEEF	164	0	0.00 %
⊞ Cat. (3702): FRESH DINNER SAUSAGE	444	10	2.25 %
⊞ Cat. (3796): FRESH CURED SMKD PORK	234	6	2.56 %
⊞ Cat. (3975): FROZEN	24	0	0.00 %
⊞ Cat. (3907): CUST VALUE PGM	88	0	0.00 %
⊞ Cat. (3971): FRESH CHICKEN	335	0	0.00 %
⊟ Cat. (3972): FRESH TURKEY	160	14	8.75 %

SubCategory	Number of Products	Scorecarded Products	Percent Scorecarded
☑ SubCat. (1): Fresh Turkey	160	14	8.75 %
⊟ Cat. (3974): FROZEN CHICKEN	124	18	14.52 %

SubCategory	Number of Products	Scorecarded Products	Percent Scorecarded
☑ SubCat. (1): Frozen Chicken	124	18	14.52 %
⊞ Cat. (4077): FRESH BEEF	1081	0	0.00 %
⊞ Cat. (4078): FROZEN BEEF STEAKS	16	2	12.50 %
⊞ Cat. (4079): FROZEN BEEF PATTIES	88	2	2.27 %
⊞ Cat. (4099): FRESH PORK	675	0	0.00 %
⊞ Cat. (4100): FROZEN PORK	13	0	0.00 %
⊞ Cat. (4365): FRESH CORNED BEEF	5	0	0.00 %
⊞ Cat. (4366): FRESH BEEF OFFALS	90	0	0.00 %
⊞ Cat. (4370): FRESH DSD POULTRY	276	0	0.00 %
⊞ Cat. (4371): FRESH SEASONAL POULTRY	70	3	4.29 %
⊞ Cat. (4372): FRESH VALUE ADDED BEEF	47	2	4.26 %
⊞ Cat. (4373): FROZEN DSD	103	0	0.00 %
⊞ Cat. (4374): FROZEN SEASONAL POULTRY	138	12	8.70 %
⊞ Cat. (4814): FRESH PREMIUM BEEF	180	0	0.00 %
⊞ Cat. (4815): FRESH NAT ORG BEEF	25	0	0.00 %

Retail Link

Add to My Homepage | Get Support

Scorecard Modeling | Packaging Reports

Wal-Mart Stores Inc. Sustainability Scorecard Modeling

Modeling your scorecard allows you to experiment with different materials to see how they can improve your score as well as help the environment.

Save Model

To save this model, enter a name and click the "Save Model" button.

[Save Model]

[Delete Model]

Model Library

Use the hierarchy below to find the product you would like to model, or click an existing model name to review.

[Create New Model]

- SAMS Club USA
- Wal-Mart Stores Inc. USA
  - FROZEN FOODS
  - MEAT - FRESH & FROZEN
    - 10/1 TKY HEN
    - 10/2 TKY RW
    - 10/2 TKY TOM RW
    - 10/A TKY TOM CX
    - TKY BURGER BOX
    - XMAS TKY
    - TASTY TURKEY 95%
      - TASTY TURKEY 93% M
    - TASTY TURKEY 97%
    - TASTY TURKEY 85% ROLL
    - TASTY TURKEY 93% #1
    - TASTY TURKEY HICKORY
    - TASTY TURKEY SUASG
    - TASTY TURKEY OVEN
    - TASTY TURKEY CUTLETS
    - TASTY TURKEY STUFFED
    - TASTY TURKEY SESAME
  - PRE PACKED DELI
  - SERVICE DELI

Package & Model Properties

Package Information		Model Information	
Package Name:	TASTY TURKEY 93%	Model Name:	TASTY TURKEY 93% Model
Supplier Name:	757852 (TASTY TURKEY STORE)	Supplier Name:	757852 (TASTY TURKEY STORE)
Package Create Date:	12/13/2007 9:23:42 AM	Model Create Date:	12/28/2007 2:27:26 PM
Package Creator:	Ted Anderson	Model Creator:	Ted Anderson

Package & Model Scores

Metric	Raw Score	Rank	Weight	Raw Score	Rank	Weight
Greenhouse Gas Emissions from Package Production	0.000123121	45%	15%	0.000132056	41%	15%
Sustainable Material	2.00000000	49%	15%	2.00000000	49%	15%
Average Distance to Transport Material	1.636857412	10%	10%	1.000000000	68%	10%
Package to Product Ratio	0.200086005	19%	15%	0.198086005	19%	15%
Cube Utilization	0.350000000	31%	15%	0.580000000	46%	15%
Recycled Content	0.253696687	44%	10%	0.256807620	45%	10%
Recovery	2.406594839	45%	10%	2.658572140	73%	10%
Renewable Energy to Power Each Facility	0.000000000	42%	5%	0.000000000	42%	5%
Innovation Different from Energy Standard	0.000000000	49%	5%	0.000000000	49%	5%
Total Normalized Score (out of 10)	3.6200			4.5500		

Equivalents

Below are just a few equivalents to your Greenhouse Gas Emissions from the above package production. This is only used as a tool to relate Co2 emissions to a more understandable equivalent.

For every 1,000 packages produced, the Greenhouse Gas emissions are equivalent to **0.07** acres of pine or fir forests storing carbon for one year.
  ▸ Calculations & References

For every 1,000 packages produced, the Greenhouse Gas emissions are equivalent to **0.02** barrels of oil
  ▸ Calculations & References

Package Modeling - Usage

- Uses the same format as Wal-Mart's Sustainable Packaging Scorecard.
  - All questions, metric data, and calculations are the same.
  - Almost the same, but allows for experimentation instead of package submission.

- Modeling your packages is easy:
  - Create a package.
  - Create a package model.
  - Compare scores.
  - Print results, questions and answers.

Wal-Mart Stores, Inc.
Package Modeling

1.2.2.8

Wal-Mart Stores Inc. Package Modeling

Modeling your package allows you to experiment with different materials to see how they can improve your score as well as help the environment.

Save & Calculate

To save a package or model, click the "Save & Calculate" button.

Save & Calculate

Step 1: Create a Package

Click here to create a package that you wish to model. When finished, click the "Save & Calculate" button

Create New Package

Step 2: Create a Model

Select a package in the library below and click here to create a new model for it.

Create New Model

Package & Model Library

Use this hierarchy to find the package you would like to model, or click an existing model name to review.

- (5.5555) Milk Jug
  - Milk Jug Model
- (5.0000) LDPE Milk Jug
  - LDPE Milk Jug Model
  - LDPE Milk Jug Model w/PLA Cap
- (6.1111) HDPE Milk Jug w/Local Suppliers
  - HDPE Milk Jug w/Local Suppliers Model

▶ Package & Model Properties

▼ Package & Model Scores

	Wal-Mart Metrics	My Metrics

Metric	Package Score	Model Score
⊞ Greenhouse Gas Emissions from Package Production	0.00082633	0.00082633
⊞ Material Health and Safety	2	2
⊞ Average Distance to Transport Material	1	1
Package to Product Ratio	0.08495426	0.08023458
Cube Utilization	0.8	0.85
⊞ Recycled Content	0.04231426	0.04231426
⊞ Recovery	2.03462071	2.03462071
Renewable Energy to Power Each Facility	0	0
Innovation Different from Energy Standard	0	0
Weighted Score:	**4.9074**	**6.5741**

▶ Equivalents

Scorecard Questions

Background & Product Info.

What is the net weight per selling unit item?	9	Pounds

Selling Unit Packaging materials

What is the percentage of cube utilization?	9
How many selling unit packaging materials are used?	3 Material(s)
What is the first packaging material?	LDPE
What is the total weight per package for this material?	05	Pounds

So how did Vanguard create a unique program while assisting our customers with Walmart demands?

- *We began with recognizing the simple truth that most of our customers were either not in the game or were not fundamentally sustainable.*

- *We decided that the best starting point for these customers was to deal with a packaging vendor that was already in the game.*

We needed to become that vendor.

Our Initial Steps (2007-2008):

- *Accepted that this was a top down process. The burden was on me to push us forward and to get involved at the industry level.*

- *Decided to factor how we could lower our carbon footprint now and in the future (what is the impact in 5 years of a decision made today?).*

- *Defined what was and wasn't a sustainable input that we could control. We settled on: Paper, Labor, Money and Time.*

- *We developed Promises, Commitments and Goals for each.*

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Our Initial Steps (2007-2008):

- *Using these as maps, we drilled down to what items we could control and by how much. We attacked the biggest impact items first. We grabbed the low hanging fruit*

- *Over time, this approach created an attitude change where sustainability became a part of our DNA*

- *We committed that our actions would be economically viable and repeatable at other facilities. We determined that we would share what we did with others so that they could incorporate them as well.*

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2009 and 2010:

- *In 2009, we began the process of designing a brand new manufacturing facility that gave us the chance to move Vanguard forward in big steps.*

- *Everything was up for discussion and all employees were included.*

- *Equipment manufacturers were required to submit concepts and ideas.*

- *Our vendors, who already knew of our commitment were brought in for consultations as well.*

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Our new facility completed in 2010 has numerous sustainability initiatives in the production area including:

- *Full T-5 lighting all on motion sensitive switches*

- *Scrap removal system that consumes 40% less electricity*

- *Phased electric motors wherever practical*

- *Equipment installed in lineal process "pods"*

- *The building is infinitely expandable without damage to the building and minimal additional carbon footprint*

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Office Sustainability Initiatives Include:

- *Removal of 9000 square feet of carpet in favor of stained concrete floors and removal of 6000 square feet of ceiling tiles.*

- *Use of over run lights from other construction projects.*

- *Use of solar power despite being under ground.*

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VANGUARD COMPANIES

VANGUARD COMPANIES

VANGUARD COMPANIES

Process Sustainability Initiatives:

- *Created a new position of Process Improvement Manager.*

- *We recycle everything that is recyclable.*

- *What isn't recyclable is segregated into two dumpsters, one for the landfill and one for an Alternative Solid Fuel Program.*

- *ASF program burns the waste at 3000 degrees to generate steam at a co-generation power plant. The air emissions must meet Federal guidelines for comparable coal fired power plants.*

- *95% of all our waste stays out of a landfill.*

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Sugar Creek Cement Plant

- Replaced 1950's cement plant

- Construction began April 1999; plant started up in March 2002

- 1,000,000 tons annual cement production

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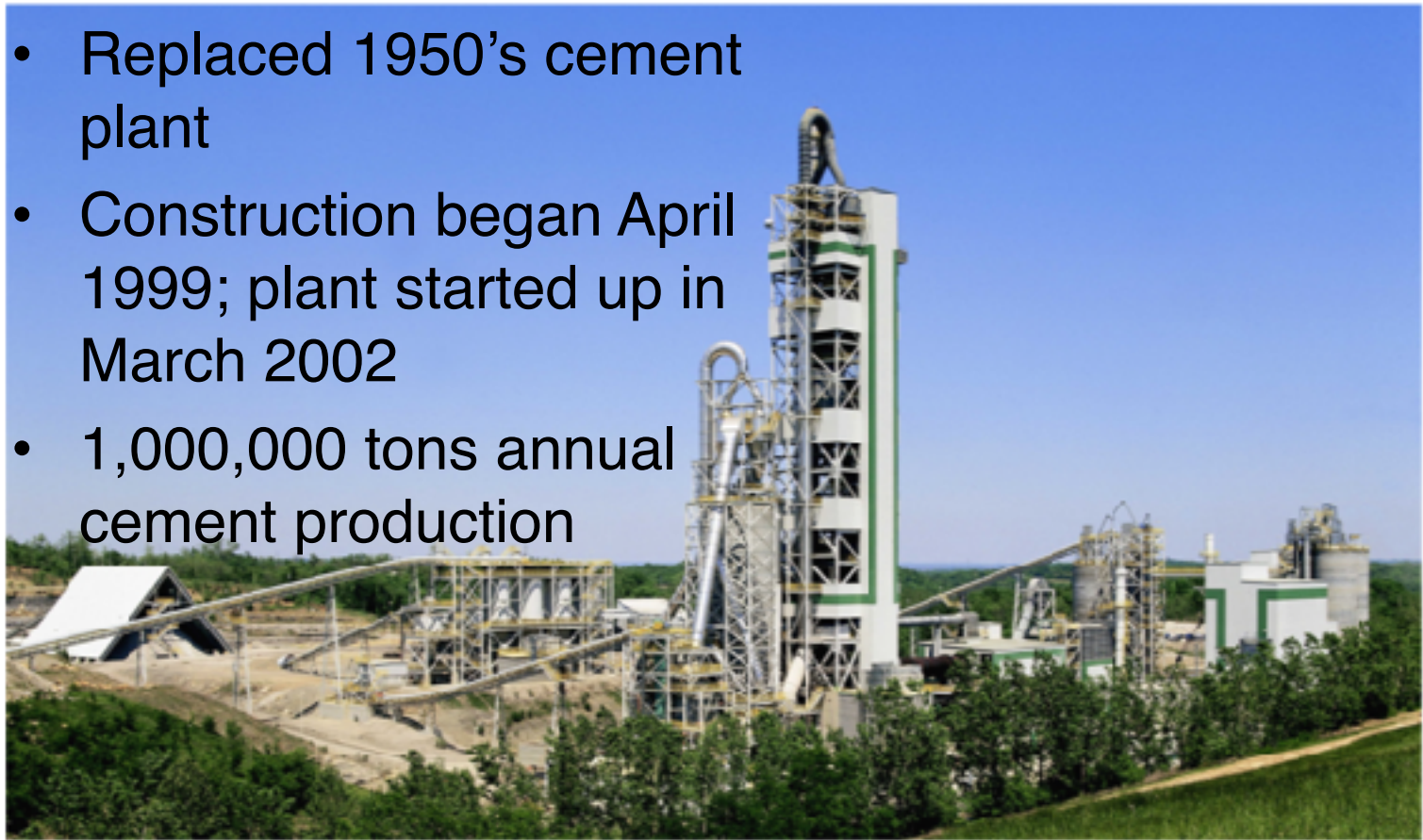
Vanguard & Sustainability

Alternative Solid Fuel Requirements

Examples of waste streams we are managing:

- Textiles: cotton, latex, nylon, polyester, rayon, fabric or yarn
- All categories of plastics (1-7) *(although limited on # 3, PVC)*
- Plastic scrap
- Carpet scrap
- Rubber related material
- Tape and labels
- Coated paper
- Paper waste
- Synthetic turf
- Packing materials - pallets, cardboard, foam, plastic, strapping, etc.

Non-acceptable materials due to handling, processing, permit limitations or health and safety issues are:

- food
- glass
- free liquids
- bricks
- fine particles
- metal
- hazardous waste
- bio-waste
- rocks
- powders
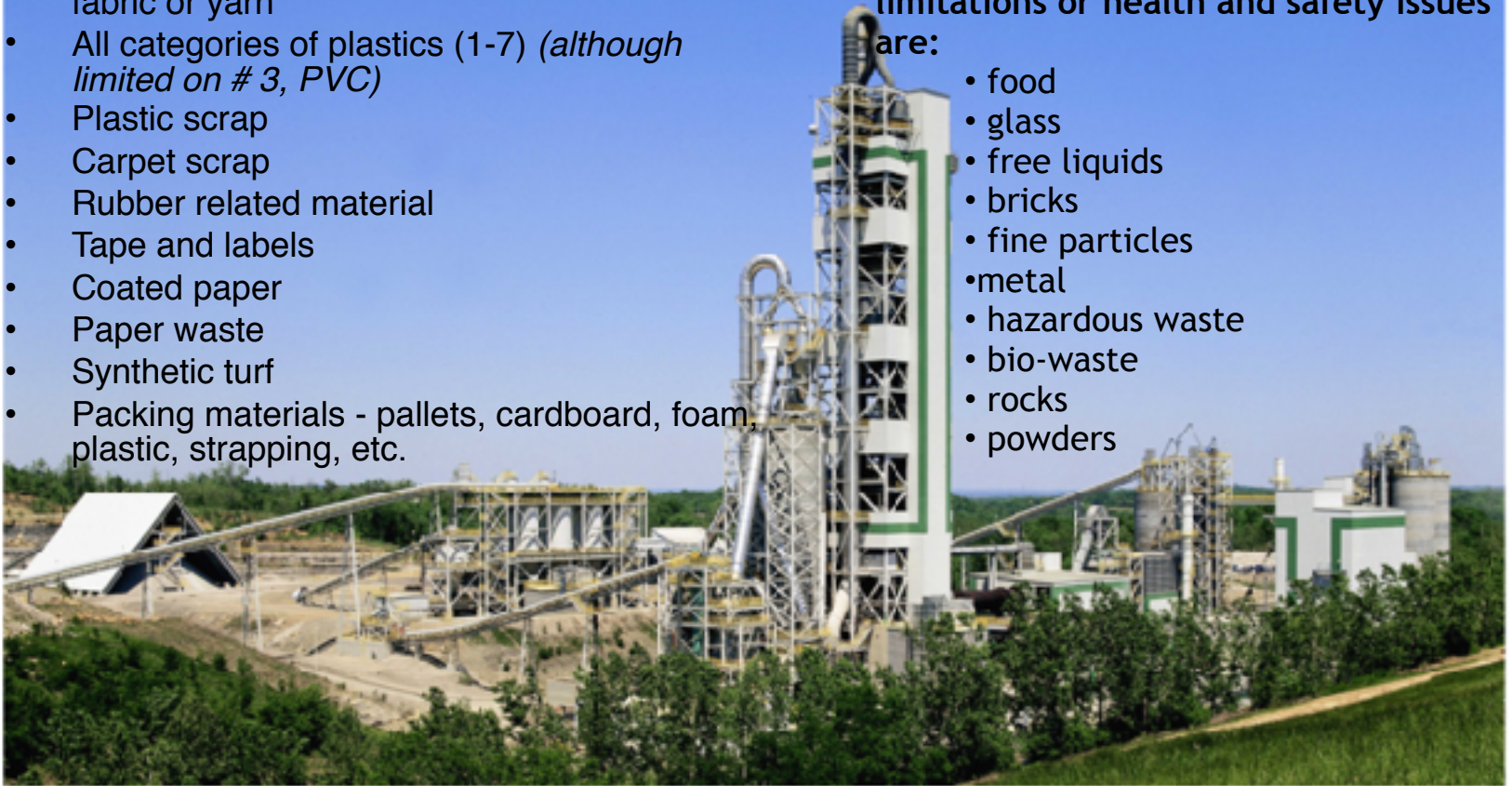
Establish a Comprehensive Waste Management Program:

- *Double Lined Kraft (DLK) and Old Corrugated Containers (OCC) – RECYCLED*
  - *502,960 lbs. (251 tons) October through December 2010*
- *Culls – RECYCLED*
  - *662,980 lbs. (331 tons) October through December 2010*
- *Cores – RECYCLED*
  - *37,990 lbs. (19 tons) October through December 2010*
- **Stretch Film – RECYCLED**
  - *0 lbs. (0 tons) October through December 2010*
- *PET Strapping – RECYCLED*
  - *400 lbs. (.20 tons) October through December 2010*
- *Comingled Plastic – RECYCLED*
  - *46,590 lbs. (23 tons) October through December 2010*
- *INK SLUDGE and Miscellaneous Waste (Allied)– LAND FILL*
  - *48,100 lbs. (24 tons) October through December 2010*

VANGUARD
COMPANIES

Vanguard & Sustainability

- ***Double Lined Kraft (DLK) and Old Corrugated Containers (OCC) – RECYCLED***
  - *502,960 lbs. (251 tons) October through December 2010*

- ***Burned at LaFarge (Production Waste, Plastic Bottles) RECYCLED (Systech)***
  - *32,560 lbs. (16 tons) October through December 2010*

- ***Shredded Office Paper - RECYCLED***
  - *700 lbs. (.35 tons) October through December 2010 (estimated by Shred Time @350 lbs per pick up X 2 pick ups)*

- ***Toner cartridges***
  - *Recycled by toner supplier*

- ***Fluorescent bulbs***
  - *Recycled by Heritage-Crystal Clean*

- ***Dry cell batteries***
  - *Recycled by Heritage –Crystal Clean*

- ***Pallets***
  - *Collected by IFCO*

- ***TONS OF SOLID WASTE RECYCLED 4TH QTR:***
  - ***665Ton*** *(97% of total waste generated)*
  - ***24 tons of waste sent to the landfill*** *(3% of total waste generated)*

- ***YTD PERCENTAGE OF TOTAL WASTE RECYCLED:*** *94%*

- ***2938 TONS RECYCYED; 197 TONS TO LANDFILL***

What's next in 2011?

- *Development and construction of a sustainability study facility in Bentonville in partnership with Northwest Arkansas Colleges and Universities.*

- *Further development of our forestry initiatives with a goal of developing a carbon credit forest for use of our customers.*

- *New design initiative that every sample request have a sustainable alternative developed concurrently even if it wasn't requested.*

- *Installation of a tri-feed gluer and development assistance to Walmart with the RRP program.*

VANGUARD COMPANIES

Retail Ready Packaging (RRP)

- *Vanguard purchased a new trifeed gluer in November 2010 and installed it in January 2011*
- *There are only a hand full of gluers in North America with similar capabilities*
- *Its ability to adhere 3 separate pieces of corrugated together or a piece of chipboard to corrugated will offer our clients a variety of new options*
- *This machine will allow us to create designs that were previously unable to be manufactured*
- *One of our goals is to create "sub-assemblies" of display components that will drastically reduce the setup time*

VANGUARD COMPANIES

Stackable Trays

- Our trifeed gluer will enable our clients to move away from the traditional "pack and stack" tray design

- Stackable trays run on this gluer will have on average 10% less paper than traditional designs

- These trays have drastically faster setup times than traditional designs

VANGUARD
COMPANIES

RRP Trays

- The new trifeed gluer has the ability to glue trays into shipper sleeves
- These sleeves will use less paper than a traditional shipper
- The trays are removable from the shipper by hand without the use of knives or tear tape
- These trays are a perfect example of the RRP designs being heavily encouraged by major retailers
- These trays are demonstrating up to a 35% faster stocking time in the retail environment
- Retailers are encouraging vendors to factor in the cost of the entire supply stream

VANGUARD COMPANIES

What can FPPA members start doing today?

Recognize your role in the Packaging chain for your customers and their customers. Examples include:

- *Do you have an understanding of your own major inputs?*
- *Do you know what your vendors have to offer you in assistance?*
  Can you incorporate their actions into yours?
- *Do you consult on the topic to your customers?*
- *Do you have a plan on how to improve everyday?*
- *Do you quantify the results of what you are already doing?*
- *Can anybody get on your web site and know you are a player or determine that you aren't?*
- *Are you currently certified or in the process of certification?*
- *Are you green washing even if unintentionally?*
- *What is your CEO resume saying about you?*

VANGUARD
COMPANIES

Understand your industry and what it is doing.

- *Does your industry have a Life Cycle Analysis or maybe even more than one?*

- *If there is an LCA, do you understand what it says?*

- *Is your industry fragmented on the topic and if so, where do you stand?*

- *Are you a "go to" source for the industry?*

- *Do you actively participate in your industry's initiatives, programs, competitions, ect.*

VANGUARD COMPANIES

What can FPPA members start doing today?

- *Do you know who is speaking for you and what they are saying?*

- *Do you know who is establishing the credentials for your products?*

- *Do you know who compiles your industry's data and what it says?*

- *Do you know what the guy down the street is saying about you?*

Do you even know who your competition is?

Maybe your competition isn't in this industry at all!

How would other printing processes define you so that they can sell more product? Here are actual things I have heard in the marketplace:

- *Singleface lamination with a litho printed top sheet uses **12-16% less paper by basis weight** than a comparable flexo printed box.*
- *The litho process **releases substantially less VOC's** than flexo printing.*
- *Metal plates are inherently more sustainable than flexo plates derived primarily from **petroleum based products**.*
- *Flexo plates require huge amounts of heated space for storage which **consumes energy**.*

True or not doesn't always matter as much as perception!

VANGUARD COMPANIES

What you need to be saying:

- *Flexo ink is **water soluble** and can come from a variety of **renewable sources**.*

- *Flexo printing uses at least one if not two fewer machine passes in the manufacturing process **which equates to significantly less energy consumed**.*

- *Fewer passes creates **less waste** on the production floor.*

- *On corrugated, flexo printing is frequently done on **high recycled content paper** (corrugated average for recycled content is 45% in NA). Litho printing for labels and top sheets is almost always on virgin bleach.*

- *Flexo wash up does not require the **cleaners and solvents** required in the litho process.*

VANGUARD COMPANIES

To Summarize:

- *Start by understanding where you are today.*

- *Know who can speak for you and determine if that is the message you want spoken.*

- *Create a story and tell it.*

- *Come up with ways that only allow you to define your company.*

- *Be a partner up the chain and down the chain.*

- *Understand the power of small.*

Thank you for your time and attention.
I will now field your questions.