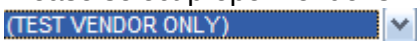
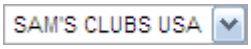
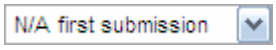
- **Background & Product Information:**
    - Basic information required to identify the product and its package.
  - **Vendor Number:**
    - Please select proper vendor's number from the list in drop down box e.g. 
  - **Wal-Mart/Sam's Club Item Number:**
    - Please enter the Wal-Mart or Sam's club item number. The format is as follow:
        - Sam's Club item number: (For example: 121234569)
          Two digit category number (For example: 12, or 21, 76, 95)
          Six digit speed number (For example: 123456)
          Final digit is always a 9
        - Wal-Mart item number: (For example: 001223456)
          Two digit subclass, always 00
          Two digit department (For example, 12, or 21, 76, 95)
          Five digit sequence number (For example 23456)
    - If you only know your 6-digit Sam's Club number or 5-digit Wal-Mart number, use the information above to create the complete 9-digit number.
  - **Product UPC:**
    - Most suppliers use 12 digits for domestic US items. International items, books, and fresh meat may use 14 digits.
    - If you are entering multiple items that have similar scorecard answers, you can make copies of your item by clicking  after you completed the first score card. (See the Tutorial for additional details.)
  - **What is the net weight per selling unit item?**
    - Please enter net weight of product in kg, or lbs. The units can be selected from the drop down box. 
        - The net weight is the weight of the product contained by the packaging.
        - The product net weight will be used in the calculation of package to product ratio.
        - There are two parts to the selling unit: product and package. If the product weight is not specified, please calculate the product net weight by using the following equation:
            - Product net weight = Selling unit gross weight – Selling unit packaging weight
            - For example, net weight per selling unit item of a soda can is the weight of the soda.
            - For example, net weight per selling unit of a DVD is the weight of the actual DVD (not including the weight of the case, label, or overwrap).
        - If applicable, net weight should be based off of the label claim.
        - Please note that the selling unit is not what is sold to Wal-Mart or Sam's Club. It is the selling unit to the customer and/or member.
  - **What is the item description?**
    - Please enter the product name and/or description for this product. Maximum of 20 characters.
  - **Date of Package Launch?**
    - Please enter the date of package launch (e.g. in store date).
    - If you are filling in the scorecard for the first time on an existing package, use the date that you are filling out the scorecard.

        - If you are filling in the scorecard for a package that is not yet in the market, use the expected launch date.
    - **What was the purchasing company?**
        - Please select purchasing company or division within Wal-Mart Inc. or Sam's club from the drop down box. 

(note that this is not your packaging company)
    - **What is the estimated number of item sold to the above purchaser?**
        - Please enter estimated number of items sold per 12 month period to purchaser above.
    - **Testing was conducted and the new package performance is?**
        - Suppliers are responsible for determining testing protocols. Suppliers are ultimately responsible for package performance throughout the supply chain. Wal-Mart and Sam's club are not responsible for testing. Prior to launch of a new or modified package, suppliers should have conducted testing on the performance of the package.
            - Please select the status of your package from the drop down box. 

                - If this is the first submission please select "N/A first submission".
                - If there is no change to the performance, please select "Parity to current".
                - If the new package improves the performance, please select "Improved over current".
                - If the new package declines the performance, please select "Reduced over current".
    - **What is the primary product department/category?**
        - Please select department or category of the product from the list by clicking "Please Select A Category/Department" link.
- **Selling Unit Packaging materials**
        - All packaging materials that leave the store or club with customer or member after the purchase of products.
            - For example, a member bought a 24 pack of water from Sam's Club. The member pulls the 24 pack directly from the pallet. In this example, the selling unit packaging materials are the components of a 24 pack including the bottles, labels, closures, corrugated tray, and shrink wrap.
            - For example, a customer bought a box of cereal from Wal-Mart. The selling unit packaging materials are the components that contain/advertise the cereal, including carton, film bag, and any additional inserts/stickers.

        - Complex components containing small amounts of multiple materials should be evaluated by the predominant material.
            - For example, a trigger sprayer may contain small amounts of multiple plastics and metals. The component should be evaluated and enter into the scorecard based on the predominant plastic material.

        - Distinct and significant materials must be evaluated separately.
        - For example, a plastic bottle with an in-mold paper label must be considered as two different types of material.
    - **What is the Cube Utilization for the selling unit?**

- Cube Utilization (CU) is the overall volumetric measurement of packaging design efficiency. Selling Unit Cube Utilization is abbreviated as SUCU.
- SUCU is the ratio of product volume to selling unit volume.
- Increase of CU can improve sustainability by reducing packaging material, shipping, handling and storage or retail space.
- The limitations of how much CU can increase are: loss prevention, damage control, packaging aesthetics, etc.
    - Any product with a known volume needs an actual value for SUCU. For example, many products are sold by volume, which makes the SUCU calculation straight forward. Other products are sold by weight with a known density, which makes the SUCU calculation possible by converting weight to volume. Other items, such as DVD players, have known product dimensions. The product volume can be calculated by multiplying the length, width, and the height. (See tables below for additional details)
- **Equations:**
    - **Selling Unit Cube Utilization Equations:**
        - SUCU equals the product volume divided by selling unit volume.
        - Product volume must have the same unit of measure as the selling unit volume. If necessary use unit conversion factors. (Selling unit volume is typically in cubic inches. Product volume will need to be converted as necessary.)
        - $$SUCU = \left(\frac{PV}{SL \times SW \times SH} \right)$$
        - Most SUCU values will be less than 1. However, some products do take up the entire amount of selling unit volume resulting in SUCU = 1. (For these products, the packaging does not add ANY volume to the selling unit.)
    - **Definitions for equations:**
        - SUCU = Selling Unit Cube Utilization (two significant figures)
        - SL = Maximum Selling unit length
        - SW = Maximum Selling unit width
        - SH = Maximum Selling unit height
        - PV = product volume (see tables 1 and 2 below)

Table 1- Example focused table

Product Net Contents	**Product Volume Definition**	**Example**
Liquid (volume)	label volume	A 12 fluid ounce soda has a product volume of 12 fluid ounces or 21.7 in^3.
Liquid/granule (weight)	label weight / density	A 5kg bag of sugar (with a density of .849 g/cm^3) has a product volume of 5,889 cm^3 or 359.4 in^3
Tablets	count x (average volume per known count)	A 50ct bottle of tablets (where 1000 tablets require 1000 cm^3) has a product volume of 50 cm^3 or 3.1 in^3.
Product with known dimensions	product length x product width x product height	A TV with outer dimensions 50" x 10" x 30" has a product volume of 15,000 in^3.
Films	surface area sold x thickness	A 100ft roll of aluminum foil that is 12in wide and 0.02in thick has a product volume of 288 in^3. (bags, wraps, paper, etc.)
Product dimensions equal selling unit dimension	product volume equals selling unit volume	A 10ct pack of paper plates that is 10in x 10in x 4in has 400in^3 volume. (no added length, width, or height due to packaging)
Items with varying densities	product length x product width x product height (use dimensions of known product)	A frozen meal tray contains a lasagna with dimensions 10in x 5in x 2in has a product volume of 100in^3. (many food products, frozen meals, etc)
Multipack (2pk, add-on's, etc.) Or Item containing multiple pieces (i.e. toy with multiple parts)	Sum of all individual product volume	If the aluminum foil and paper plates from the examples above are sold as a multipack, the total volume would be 688 in^3. If the toy item contains two figurines and a structure, the total volume would be the sum of all three items.

Table 2: Definition focused table

Product Net Contents	**Product Form**	**Product Volume Definition**
Volume	Any	Use the net contents statement of volume
Weight	flowable solid or liquid	Divide the net weight by settled bulk density
Weight	Solid	Smallest volume (cylinder, sphere or rectangular parallelepiped) the individual piece will fit into (see equations below). For multiple pieces add the volumes of each piece to get a total product volume
Area	Any	multiply the area by the average thickness
Length	Any	Length x width x thickness
Count and volume, weight , area or length	Any	Use the appropriate calculation from above for one item and multiply by the count.
Count	Multiple items packed in each container (not individually wrapped)	Bulk density using count rather than weight.
Count	Single item, individually wrapped items or dissimilar items	Smallest volume (cylinder, sphere or rectangular parallelepiped) the individual piece will fit into (see equations below). For multiple pieces, add the volumes of each piece to get a total product volume
any	If none of the approaches above are appropriate.	Smallest volume (cylinder, sphere or rectangular parallelepiped) the product portion of the shelf unit will fit in.

- Benefits of Increasing Cube Utilization:
  -Less packaging material: primary, case and transportation.
  -Fewer truck loads for products that cube-out a truck.
  -Fewer unit loads to handle.
  -More selling units on the shelf.
- Options to consider increasing Cube Utilization:
  -Smaller package footprint. For a bottle this means more rectangular but does not mean it needs to look like a rectangle.
  -Less headspace, especially for products sold in cartons or other rectangular packages.
  -Change the package height to fully utilize the available pallet height. Taller/thinner packages or shorter/deeper packages with an additional layer per pallet.
  -Change round containers to square or rectangular.
  -Case sizing and pallet pattern that fully utilizes the pallet.
  -Divider design that reduces the case size.
  -Eliminate the case or other secondary packaging.
  -Novel shipping platform that takes less volume than a wood pallet.
  -Design packages so they nest.
  -For flexible products, tighter packaging to compress the product.

- **How many selling unit packaging materials are used?**
  - Please select how many types of packaging materials are used in the selling unit.
  - Anything that is used to contain or dispense the product is considered to be a packaging component.
    - For example- Liquid detergent: the package components would be bottle, label, dispensing closure, and dosage cup. (everything put the liquid detergent)
  - Everything that is a part of the selling unit is either product or packaging. If it is not product, it is packaging.
  - Complex components containing small amounts of multiple materials should be evaluated by the predominant material.
  - Ink or any coatings are not considered as part of the packaging at this time.
    - For example, a trigger sprayer or a pump may contain small amount of multiple plastics and metals. The component should be evaluated and enter into the scorecard based on the predominant plastic material.
  - Distinct and significant materials must be evaluated separately.
    - For example, a plastic bottle with an in-mold paper label must be considered as two different material types.
  - Please select number of materials from the drop down box.

- **What is the packaging material?**
  - Please select one of the material types that was used in the package from the “Please select a packaging material” link.
  - Note: descriptions of ‘first’, ‘second’, ‘third’, etc., are used only to establish order. It does not mean ‘primary’ or ‘secondary’, etc.

- If you have more than one type of material there should be unique section for each material in the score card.
- The packaging materials are divided into four larger categories which are Wood/Paper, Polymer, Metal & Other, and Mixed Materials.
- Please select material in the list that is most similar to the actual material used.

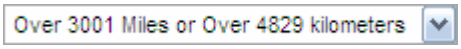
▪ **What is the total weight per package for this material?**

- Please enter the weight of the material used (in lbs or kg) per selling unit.

- If the weight is less than 0.1 kg or lbs, do not round the number up or down. For example, if you know the package weight is 0.0000123 kg, you would enter 0.0000123 in kg not 0.1 kg.
- Use appropriate significant digits based on the item and your measurement capabilities.
- The sum of each individual material weight will be used in the calculation of package to product ratio.

▪ **How far did this material travel before packaging occurred?**

- Distance traveled from material supplier to the packaging manufacturing line.
- If the material travels from 2 or more locations, please enter the weighted average distance based on the volume of material sourced from each location.



- **Transport Packaging Materials**
  - Transport Packaging is **<u>any material that does not leave the stores/clubs</u>** with consumers and/or members. In other words, any material that goes out the back of the stores and/or clubs.
  - Some of the examples that would fit in this category are listed below:
    - Pallets
    - Trays
    - Dividers
    - Tier sheets
    - Bottom cap/Top cap
    - Layer trays
    - Corner posts
    - Unit load stretch wrap
  - **Is this item a break pack?**
    - A break pack is a transport package that can be divided to send to individual stores without unpacking completely.
    - This type of packaging is mainly for Wal-Mart. When product comes into the DC from manufacturer, it gets divided into smaller amounts to send out to individual Wal-Mart stores.
    - When your product is shipped, is it able to be divided without unpacking it completely?
    - Please select one of the options. e.g.

  - **What is the Cube Utilization for transport packaging?**
    - Transport cube utilization is equal to volume of all selling unit volume divided by volume of transport unit (usually a pallet).
    - Transport cube utilization is abbreviated as TCU.

- Transport packaging is defined as any packaging that is used in the transport process.
- All materials that are not selling unit packaging materials are transport packaging materials.
- Consider all materials that leave your manufacturing facility.
- All items should be analyzed compared to shipping platform used for full pallet distribution (e.g. manufacturing line to DC), even though items may be transported in many different ways in the supply chain.
    - Exception: Direct import items and floor loaded domestic items should be analyzed compared to the commonly used sea or truck container. (See tables below for details)
- Cube Utilization (CU) is the overall volumetric measurement of packaging design efficiency.
- Transport cube utilization is abbreviated TCU and represents the percent of transport unit volume that is actually selling units.
- Increase of CU can improve sustainability by reducing packaging, material, shipping, handling and storage or retail space.
- Equations:
    - Transport Cube Utilization Equation
        - $TCU = \left(\frac{SUV\_all}{TPV} \right)$
        - TCU is equal to volume of all selling unit volume divided by volume of transport unit (usually a pallet).
    - **Definitions for equations:**
        - TCU = Transportation Cube Utilization (two significant figures)
        - SUV_all = volume of all selling units contained within the transport unit
        - TPV = volume of the transport unit
        - See tables 3 and 4 below

Table 3: How to calculate selling unit volume (SUV_all) for transport cube utilization

Type of Item	**Total Selling Unit Volume Definition**	**Example**
Known selling unit dimensions (most items)	Selling unit length x selling unit width x selling unit height x the # of selling units in the transport unit	A bottle of water has dimension 3" x 3" x 9". The transport unit is a pallet, which contains 800 selling units. SUV_all = 3 x 3 x 9 x 800 = 64,800 in^3
Items that nest or compress during transportation	Assuming there is no airspace, the definition is the volume containing all of the selling units as they ship. If there is airspace, you must subtract that volume.	100 individually sold cups are shipped stacked within each other. Each stack is 4" x 4" x 25". The cups ship on a pallet containing 100 stacks. SUV_all = 4 x 4 x 25 x 100 = 40,000 in^3 Note: if you had not accounted for the nesting that happens through stacking, the SUV_all value would have been much greater.
Unknown selling unit dimensions (some apparel)	Smallest volume (cylinder, sphere or rectangular parallelepiped) the selling unit will fit into x the # of selling units in the transport unit	Direct Import example: 100 socks fit into a case that is 12" x 12" x 12". There are 500 cases per sea container. Volume of one sock= (12 x 12 x 12)/100 = 17.28 in^3 SUV_all = 17.28 x 100 x 500 = 864,000 in^3

Table 4: How to calculate transport unit volume for transport cube utilization

Type of Shipment	**Transport Unit Volume Definition**	**Example**
Domestic, on a shipping platform	Unit load length x unit load width x unit load height NOTE: For each of the above, use the greater value: actual length or 48", actual width or 40", actual height or 52"	A unit load of cleaning products is shipped on a Chep pallet with 1" of underhang on each side. The total height of the load is 51.50" TPV = 48 x 40 x 52 = 99,840 in^3 A unit load of frozen food is shipped on a white wood pallet. The cases of frozen food overhang the pallet, resulting in unit load footprint dimensions of 49" x 41". The total height of the load is 75" TPV = 49 x 41 x 75 = 150,675 in ^3
Domestic, floor loaded	Volume of the most used container or truck. Length x width x height	A floor loaded sofa is typically put into a truck with dimensions: 474" x 92" x 110". TPV = 4,796,880 in^3
Direct Import	Volume of the most used container. Length x width x height	A floor loaded dishware product is loaded into a sea container with dimensions 474" x 92" x 105". TPV = 4,578,840 in^3

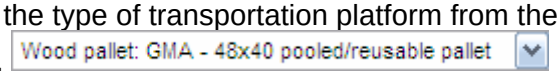
- Benefits of Increasing Cube Utilization:
  -Less packaging material: primary, case and transportation.
  -Fewer truck loads for products that cube-out a truck.
  -Fewer unit loads to handle.
  -More selling units on the shelf.

  Options to consider increasing Cube Utilization:
  -Smaller package footprint. For a bottle this means more rectangular but does not mean it needs to look like a rectangle.
  -Less headspace, especially for products sold in cartons or other rectangular packages.
  -Change the package height to fully utilize the available pallet height. Taller/thinner packages or shorter/deeper packages with an additional layer per pallet.
  -Change round containers to square or rectangular.
  -Case sizing and pallet pattern that fully utilizes the pallet.
  -Divider design that reduces the case size.
  -Eliminate the case or other secondary packaging.
  -Novel shipping platform that takes less volume than a wood pallet.
  -Design packages so they nest.
  -For flexible products, tighter packaging to compress the product

- **How many materials were used in the transportation of this product?**
  - Please enter the number of different material types used in this package for transportation that do not leave the store or clubs with customer and/or members. Transport packaging materials are thrown away/recycled by the associates at the clubs e.g.
  - If you have more than one type of material there should be a unique section for each material in the score card. Note: the first material is always the shipping platform, unless you have selected floor loaded. If any other material is used, you will need to select 2 materials or more.

  - Please select material in the list that is most similar to the actual material used.
- **What is the shipping platform for this package?**
  - Please select the type of transportation platform from the drop down box e.g.

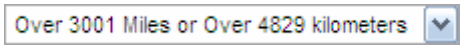
  - Consider transportation from manufacturing to DC.
- **How many selling units are shipped in this transport packaging?**
  - **For the first material, which is always the shipping platform, unless you have selected 'floor loaded':**
    - Please enter the number of selling units on the shipping platform. e.g. If the platform has 30 cases and each cases contains 10 units, the number of selling units per platform is 300.

- **For the all other transport materials:**
  - Please enter the number of selling units in the transport packaging.
  - The number of selling units entered must correspond to the weight of the material in the next question (e.g. You can enter the total number of selling units per platform and then enter the weight of all corrugated per shipping platform, including cases, dunnage, etc. Or, you can enter the number of selling units per case and then enter the average weight of corrugated per case.)

- **What is the total weight per package for this material?**
  - Please enter total weight of this material per the number of selling unit above e.g. 

  - **For the first material, which is the shipping platform, unless you have selected 'floor loaded':**
    - Enter the total weight of the shipping platform.
  - **For the all other transport materials:**
    - Enter the weight of the material used for the # of selling units inputted in the previous question. (e.g. You can enter the total number of selling units per platform and then enter weight of all corrugated per shipping platform, including cases, dunnage, etc. Or, you can enter the number of selling units per case and then enter the average weight of corrugated per case.)

- **How far did this material travel before packaging occurred?**
  - Distance traveled from material supplier to the packaging manufacturing line.
  - If the material travels from 2 or more locations, please enter the weighted average distance based on the volume of material sourced from each location.



- **Additional Information**
  - Additional information serves as "extra credits" for the score card. This section will concentrate on the production of packaging materials.
  - This section is only required to be filled out if the packaging material required less energy to create than the industrial average.
  - You are required to submit a completed full life cycle inventory by third party to ISO 14000 series standards.

- **What percentage of the packaging manufacturing facility runs on renewable energy?**
  - Please enter the percentage of renewable energy used in the packaging facility for manufacturing the item.
  - Renewable energy can be obtained from sources that do not deplete.
  - Enter zero (0) if you do not know the percentage.

- Examples of renewable energy are solar energy, wind power, water power, biofuel, liquid biofuel, solid biomass, biogas, geothermal energy.
- For example, if 10% of your total energy use comes from solar power, please enter 0.10
- This value is put directly into the metric “Renewable Energy to Power Each Facility”. The higher the number, the better.

- **What percentage of energy efficiency gain from unique manufacturing innovations?**
  - This only applies to manufacturing innovations that decreases overall energy use.
  - Please enter the efficiency gain from the manufacturing innovations.
  - Enter zero (0) if you do not know the percentage.
  - For example, enter 0.05 if you gain 5% efficiency because you capture steam released from production to power part of your manufacturing line.
  - This value is put directly into the metric “Innovation Different from Energy Standard”. The higher the number, the better.
- **What is the name of a third party verification company?**
  - Please enter the name of the third party verification company that has validated the information entered above.
  - Enter n/a if you entered zero (0) in the previous questions.
- **Any additional information regarding energy efficiency or manufacturing innovations?**
  - Please enter any additional information regarding energy efficiency or manufacturing innovations.
  - This information will not be used to affect your score, but may help us understand the numbers you have entered above.